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**Motkuri Venkatanarayana\***

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## **I Background**

The development pattern in India in the recent times witnesses a faster growing Indian economy along with widespread discontent among the people/civil society in the Indian polity which often led to unrest sometimes in a violent nature (GOI, 2008). The discontent could be due to unequal distribution of benefits of growth/development or displacement/alienation owing to lopsided development pattern. The discontent is, mostly, related to problems of livelihoods and basic survival of the people, violation of property and other basic rights, displacement, marginalization, inequality, denied access to basic services and productive resources and unemployment (GOI, 2008).

The discontent in the Indian polity is not a new phenomenon, it has been there for a long time but the development process that the Indian economy witnessed ever since its independence could not address the severity of the discontent in a holistic approach rather the policy attention has been sporadic. There have been statutory enactments and institutional mechanisms since independence addressing different aspects of deprivations which are the root causes of discontent. But these statutory enactments and institutional mechanisms ultimately could not resolve the discontent.

The discontent can be expressed in different forms. A form of discontent that led to unrest, mostly violent in nature, in India is Naxal movement. The movement had its origins in West Bengal in the late 1960s and spread over to 125 districts covering 12 states in India during last four decades (GOI, 2008). In fact the movement was organized under the initiative of a Communist party (CPI-ML). The genesis of CPI-ML was against the failure of the Indian state to deliver the promises of freedom struggle, and continuity of semi-feudal and semi-colonial base of the Indian state. The goal of the CPIML has been to get the state power in favour of the oppressed through the armed struggle. Although it could not achieve its goal, the impact of the movement in terms of changes in livelihoods of people and thereby its impact on the nation's economic growth and its development pattern holds a serious debate. There two sides of arguments wherein side holds that it has reduced social and economic inequalities in the society especially in areas where the movement is strong. The other side of the argument is that the movement has become a stumbling block for the development activities.

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\* It is based on the work submitted to Institute of Human Development (IHD) (New Delhi) which has taken up research study on the theme of Conflicts and Development sponsored by Planning Commission, Government of India. The study of Warangal Districts in Andhra Pradesh is a component of the larger study taken up by the IHD. Author is thankful to Prof. D. N. Reddy and Prof. Dev Nath for instigating and facilitating to work on this area.

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For the Government of India Naxal movement is a serious challenge to its internal security and remained as a hurdle for its developmental activities in the Naxal affected areas. More so is the government of India concern with respect to the level of violence that the Naxal movement is causing. Therefore the Government of India felt the need for an integrated approach (MOHA, 2011). As a part of the initiative, the Planning Commission has included all the Naxal violence affected districts under Backward District Initiative (BDI). It has set up an Expert Group to understand causes of discontent that led to the rise and spread of the Naxal movement so that in its multipronged strategy it can make an attempt address such problems with innovative development initiatives (GOI, 2008).

In this backdrop the presented study examines the pattern and the level of development in the Naxal moment afflicted areas/regions. A case of Warangal District in Andhra Pradesh which has been the most affected district in India by the Naxal movement and its violence, is considered for the study. Having said the paper is organized as follows. The following section II discusses the rise and decline of Naxal movement in Andhra Pradesh and in the all Indian context. Section III describes the background characteristics of the districts with respect to its historical, geographical and population. While section IV presents the analysis of district economy, the employment situation of the district is analysed in section V. An analysis with respect to agrarian economy and industrial development of the district is presented respectively in Section VI and VII. As economic infrastructure plays critical role in economic development, section VIII presents such analysis. Section IX presented the educational development in respect of literacy and schooling, in the district. Section X presents the situation of health care and health infrastructure in the district. Section XI, discusses various developmental and welfare programmes implemented in the districts and its beneficial outcomes for the same. Finally, section XII summarises the paper and presents concluding remarks.

## **II Naxal Movement in Andhra Pradesh: The Rise, Decline and its Impact**

Initially, the Naxal movement began as a revolutionary armed peasant struggle at Naxalbari in West Bengal during the late 1960s on the issues of tenancy, land reforms, equal distribution of land and remunerative agricultural wages. Later, it spread over to its neighbouring states Bihar and Uttar Pradesh in the north and then to Andhra Pradesh in the south through the linking geography of Eastern parts of Madhya Pradesh and Western parts of Orissa. In Andhra Pradesh, the Naxal movement had began in late 1960s in the north-eastern parts of the state especially in Srikakulam and Vizhinagaram districts and then spread over to rest of the state through Godavari Valley forest region to Nallamalla forest region.

In the Andhra Pradesh state context, CPI (ML) emerged with the expulsion of Tarimela Nagi Reddy and C Prahalad Rao (both known as TNR and CPR) from CPI (M) during its Plenum in 1968. The objective of the party was mobilization of workers, peasants and *adivasis* around economic struggles to finally capture the state power. But there were two centres of struggle in the state of Andhra Pradesh – Srikakulam and Telangana area, and there were differences strategies within the CPI (ML). In Srikakulam the movement led by Charu Mazumdar aimed at annihilation of class enemies and immediate armed struggle. Whereas in Telangana districts TNR and CPR led the movement with consolidating people around land struggles.

Prior to Naxal movement, Telangana districts were known for their Telangana Armed Struggle mostly led Communists against different forms of semi-feudal exploitation in the Nizam's Hyderabad State on the eve of and after independence. A total recall of Telangana Armed Struggle with the assurances of the Government of India's land reforms policy and the influence of communist's revisionism at the international level under Kruchev's leadership led to parliamentary participation of communists in India (Sudhakar and Kodandarami Reddy, 1998). The positive changes that Telangana Armed Struggle brought in were reverted back and semi-feudal exploitation continued exist. Again with the rise of radicalism among the communists while challenging the revisionism in response to the continuation of semi-feudal state structure, Telangana districts became abode of a revolutionary movement - Naxalism. The movement not only restricted to Telengana region but spread all over the state.

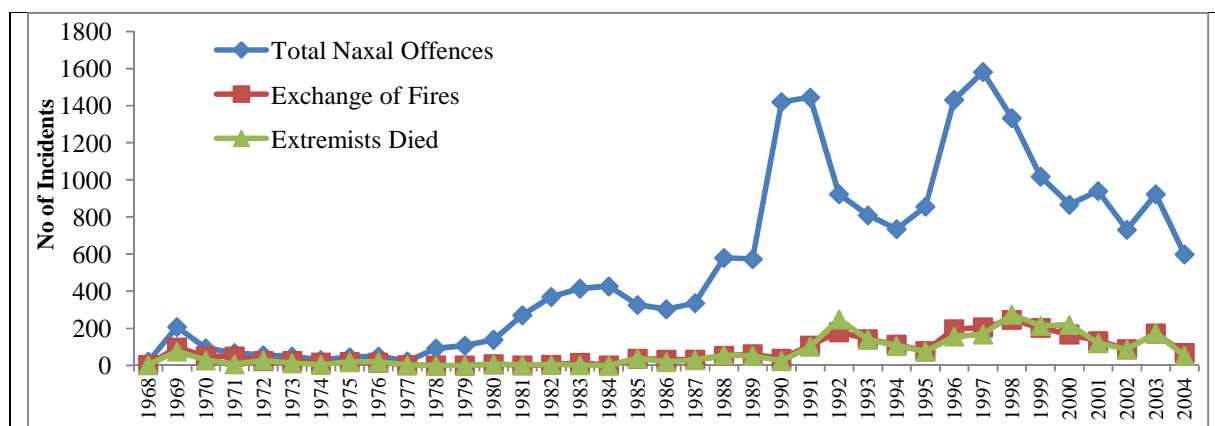
Although the Naxal movement began in late 1960s, the period between 1978 and 1987 was the rapid expansion phase in the state. It was also the period witnessed the emergence of mass organizations associated with the Naxal movement. In the post-emergency period three groups within the Naxal movement were emerged at the national level. In Andhra Pradesh two groups were the most prominent. One group is CPI (ML) Janashakti in Andhra Pradesh which aims at parliamentary participation, people's struggle and then armed struggle. The other one is CPI (ML) People's War which aims at capturing state power for the masses through armed struggle and it emerged as a major force since 1980s.

Also the 1980s was the period that witnessed oppressive response of the state government against the Naxal movement. The state's perception of Naxal movement and associated mass organizations as a threat to political power began since mid-1980s. Accordingly it responded with the repressive policy wherein CPI (ML) and associated Mass Organisations were banned during the period. The ban was lifted for some time during the early 1990s and then re-imposed again. The state police department has

The period of 1990s and thereafter witnessed the rapid changes in the national economy as well as at the state level in accordance with the changes at the global level. The reaction of Naxal groups especially the People's War group in Andhra Pradesh to these changes in the economy and to the repression policy of state was the increased the violence – number of incidents. The decade of 1990s is having the highest number of incidents related to extremist activities in the state (see Figure 2.1).

The Naxal movement was primarily a struggle against rural and agrarian issues like land and wages and also the struggle against exploitation of forest resources, tribal rights and displacement of *adivasis*/tribals, and issues related to *dalits*. In the development discourse and thereby in the state policy these issues are acknowledged and attempts were made to address the issues. The seriousness of the Government in implementing the policy addressing agrarian, tribal and *dalit* issues is questioned when these issues continue to persist and thus the struggle against these issues continued to persist. Inadequately addressed socio-economic issues can lead to alienation providing the conditions for extremism and thereby posing problems of law and order and internal security (CCC, 1997).

**Figure 2.1: Naxal Violence in Andhra Pradesh: Incidences**



**Note: 1.** Naxal Offences includes murder of civilians and police and other offences.

**Source:** Venkateswara Rao, A (undated).

Having said when examined the impact of Naxal movement on development and thereby changes in livelihoods especially in the Naxal movement dominated areas, it has both sides of the coin. The positive impact of Naxal movement in the state can be seen as the restoration of land to the tribal people and check on the tribal land alienation especially in Srikakulam and Vizianagaram districts. In Telangana districts it could eliminate feudal practices like vetti (wage-free labour), organization of small and marginal peasants and agricultural labour with assertion of their rights. There was increase in wage and working conditions agriculture. The movement definitely had its role in reversing the inequality in land holding structure (see APHDR, 2008; Revathi and Galab, 2009).

The other side of the Naxal movement is the level of violence it causes ranging from exchange of fires with police, blasts, explosions, destruction public property and killing class enemies and even civilians in such incidents. The darker dimension of the movement is that splits within the CPI (ML) and formation groups owing to in-fighting and then fight between the groups, breaking of Naxal dominant villages into groups sympathizers, killing of civilians on the name of informers (See Balagopal, 1998).

The Government of India's concern is that the Naxal violence continues to pose a serious challenge to internal security in the country and also it is blocking the developmental activities in the Naxal affected areas. The Ministry of Home Affairs in its annual reports pointed out about 55 districts in nine States, namely, Andhra Pradesh, Bihar, Maharashtra, Orissa, Madhya Pradesh, Chhatisgarh, Jharkhand, West Bengal and Uttar Pradesh are afflicted with Naxalism (MOHA, 2004 & 2011).

In the all India context, it is observed that across those states which are afflicted with the Naxal movement, Andhra Pradesh is major one. The state contributes more than one-third of the total number of incidents related to the Naxal violence took place in India in 2001. However over a period especially during the last one decade period the incidence of the Naxal violence in the state seems to be coming down (see Table 2.1).

In dealing with this decades-old problem after various high-level of deliberations and interactions with the concerned State Governments, the Government of India felt that an integrated approach aimed at the affected areas would deliver results (MOHA, 2011). Recognising that the menace of the Naxal violence has to be tackled on both security and development fronts, the Government of India has adopted a multipronged strategy<sup>1</sup> to tackle the problem of the Naxal violence.

**Table 2.1: Naxal Violence across Naxal-Inflicted States in India – Incidents and Deaths**

Sno	State	Year								
		2001	2002	2003	2004	2005	2006	2007	2008	2009
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
<b>Incidents</b>										
1	Andhra Pradesh	461	346	577	310	535	183	138	92	66
2	Bihar	169	239	250	323	186	107	135	164	232
3	Chhattisgarh	105	304	256	352	385	715	582	620	529
4	Jharkhand	355	353	342	379	312	310	482	484	742
5	Madhya Pradesh	21	17	13	13	20	6	9	7	1
6	Maharashtra	34	83	75	84	94	98	94	68	154
7	Orissa	30	68	49	35	42	44	67	103	266
8	Uttar Pradesh	22	20	13	15	10	11	9	4	8
9	West Bengal	9	17	6	11	14	23	32	35	255
10	Other States	2	18	16	11	10	12	17	14	5
Total		1208	1465	1597	1533	1608	1509	1565	1591	2258
<b>Deaths</b>										
1	Andhra Pradesh	461	346	577	310	535	183	138	92	66
2	Bihar	169	239	250	323	186	107	135	164	232
3	Chhattisgarh	105	304	256	352	385	715	582	620	529
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6	Maharashtra	34	83	75	84	94	98	94	68	154
7	Orissa	30	68	49	35	42	44	67	103	266
8	Uttar Pradesh	22	20	13	15	10	11	9	4	8
9	West Bengal	9	17	6	11	14	23	32	35	255
10	Other States	2	18	16	11	10	12	17	14	5
<b>Total</b>		<b>1208</b>	<b>1465</b>	<b>1597</b>	<b>1533</b>	<b>1608</b>	<b>1509</b>	<b>1565</b>	<b>1591</b>	<b>2258</b>

**Note:** 1. Incidents includes fire exchanges between police and Naxals, Encounters, and Naxals attack (on police, civilians – politicians, industrialists/businessmen, informers etc.); 2. Deaths include Naxals, Police and Civilians.

**Source:** Various Years Annual Reports of Ministry of Home Affairs.

The Ministry of Home Affairs emphasised the focus attention of the State Governments of the state afflicted with the Naxal movement on ensuring integrated development of the affected districts of the States (MOHA, 2004). In this regard, the State which are afflicted with Naxal violence are asked to give greater emphasis to accelerate the physical and social infrastructure especially in the affected districts (MOHA, 2004). Moreover, as part of initiative of the Ministry of Home Affairs, the Planning Commission has included all the Naxal violence affected 55

<sup>1</sup> Which include, inter alia, modernisation and strengthening of State Police Forces, long-term deployment of Central Police Forces, intensified intelligence-based well-coordinated anti-naxal operations, removal of socio-cultural alienation of the people, focussed attention on development and public grievances redressal system and creation of local resistance groups at grass root levels.

districts under Backward District Initiative (BDI) component so as to fill the critical gaps in physical and social infrastructure in these areas<sup>2</sup>. Also to deal with developmental issue related with unrest especially that of extremist group the Planning Commission of India set up an Expert Group on “Developmental Issues to deal with the causes of Discontent, Unrest and Extremism” in May 2006 and brought out a report in 2008 (GOI, 2008).

### **III Background of Warangal District**

#### ***3.1 Background of the Warangal District***

Warangal district is one of the 10 districts of Telangana region and 23 districts of Andhra Pradesh. The geographic area of the district is 12834 Sq.Kms. The District Headquarters, Warangal, lies about 150 Kms away from the State Capital city, Hyderabad. Warangal district lies between 17° 19' & 18° 36' N latitude and 78° 49' & 80° 43' East longitude. The topography of the district consists of isolated hills, rain fed tanks, lakes and shrubby forests. The Warangal district is having 1285 Sq. Kms of geographical area and it forms 4.7 per cent of the total geographical area of the state. The forest area of the district is 371 Sq Kms and forms about 6 per cent in the total forest area of the state. The district's forest area accounts 28.9 per cent in its total geographical area and shows that it is higher than that of the state average. The climate in Warangal district is generally dry. Warangal district receives maximum rainfall through the South – West monsoon, during the months of July, August and September. Normal annual rainfall is 994 mm<sup>3</sup>. The district is landlocked and surrounded by Khammam district of AP on the East, Karimnagar district on the North, Nalgonda on the South and Medak on the West. River Godavari serves as border on one side (North Eastern border) of the district, but its potentials are not yet tapped for irrigation. This district is also having considerable portion of mineral resources of the state especially coal.

Warangal is a place with a great historic past. It is the seat of the Vishnukundins and Kakatiya dynasties that ruled the region as early as pre-Buddhist period. Originally known as Orugallu – meaning a solitary cliff – Warangal was the capital of the Kakatiyas who have left their indelible stamp in the form of awe-inspiring architectural wonders. The Warangal Fort, the Thousand Pillar Temple, Ramappa Temple and Bhadrakali temple are fine remnants of the glorious bygone era. After the downfall of the Kakatiyas, the region was ruled by the Qutub Shahis, and the Nizam. Tank irrigation systems developed during Kakatiyas regime was the most wonderful ones in the state as well as in India. Particularly Tanks such as that of the Ramappa, Laknavaram and Pakala located in the district and have been irrigating thousands of acres in the district. District was part of historic Telangana Peasant Armed Struggle on the eve of independence and known for Naxal movement after independence especially since 1970s. The district is one of the prominent regions for the Naxal movement in the state as well as in India.

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<sup>2</sup> Initially, the scheme provided for an additionality of Rs. 15 crore per year per district for a period of three years.

<sup>3</sup> The areas of Cheril, Maddur, and Bachannapet receive only upto 750 mm rainfall and are classified as dry areas. Maximum rainfall is received in Mulug, Parkal, Mahabubabad and Narsampet Mandals. However, during the year 2002, many areas in the district have been facing drought related problems.



**Table 3.1: Primary Details of the Warangal District**

Particulars	Warangal	State	% of Warangal
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Geographical Area (in Sq Kms)	1285	27504	4.7
Forest Area	371	6210	6.0
% of Forest Area in GA	28.9	22.6	-
No of Revenue Divisions	5	81	6.2
No of Mandals	51	1128	4.5
No of Towns	5	210	2.4
No of Rev Villages	1098	28600	3.8
No of Villages (inhabited)	1003	26613	3.8
Total Number of Hamlets	3094	66528	4.7
No of Gram Panchayats (GPs)	1014	21895	4.6

**Note:** As on to Date (2009).

**Source:** Directorate of Economics and Statistics.

### 3.3 Population Growth

Warangal district stands at 13<sup>th</sup> position in respect of population, out 23 districts in Andhra Pradesh. Warangal district while sharing the 4.7% of state's geographical area it contributes to about 4.3% of the state population. The district share of population in the state has remained same throughout the period since 1951. The district's population has increased from 13.3 lakh in 1951 to 35.2 lakhs in 2011 (see Table 3.2). It is almost trebled during the six decades period. The population of the district as well as the state has grown at around 1.65 per cent per annum during the five decades period between 1951 and 2011. Between the inter-Census periods, the district has shown its highest population growth rate during 1971-81 whereas the state as a whole has shown its highest growth during 1981-1991 (Table 3.2). During the last decade (between 2001 and 2011) Warangal district has registered lower rate of growth of population than the state average.

**Table 3.2: Size and Growth of the Population, Sex Ratio and Density in Warangal District and Andhra Pradesh**

Year	Population (in lakhs)			Growth (%)		Sex Ratio		Density	
	Warangal	State	% of Warangal	Warangal	State	Warangal	State	Warangal	State
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
1951	13.3	311.2	4.3	-	-	-	-	-	-
1961	15.5	359.8	4.3	1.51	1.46	-	981	-	131
1971	18.7	435.0	4.3	1.93	1.92	-	977	-	157
1981	23.0	535.5	4.3	2.09	2.10	964	975	179	195
1991	28.2	665.1	4.2	2.05	2.19	962	972	219	242
2001	32.5	762.1	4.3	1.42	1.37	973	978	252	277
2011	35.2	847.4	4.2	0.79	1.05	994	992	274	308

**Note:** 1. '-' not available; 2. Sex Ratio – Females per 1000 Males; 3. Density – population per Sq Kms of Geographical Area.

**Source:** Census of India.

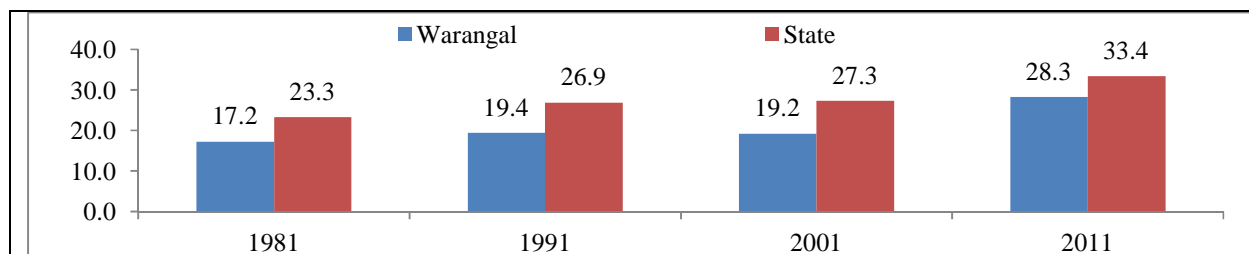


The increasing state and district population given the geographical area the density of population has increased over a period. However, as the district shares relatively larger geographical area than the state population, the density of the population in the district is lower than that of the state average (Table 3.2). In respect of the sex ratio in the district, it is more against the female population than that of the state average till 2001 and improved over the state average by 2011 (Table 3.2). In this regard its performance in improving sex ratio is better in Warangal district when compared with that of the state average particularly during the last decade.

### 3.3 Urbanisation

The distribution of population between rural and urban areas shows that still more than 70% of total population in Warangal district is located in its rural areas and the remaining resides in urban areas. The percentage of urban population in the district is significantly lower than that of the state average (Figure 3.1). Warangal district is one of the least urbanized districts in the State as well as in Telangana region. It is, however, interesting to note that Warangal City including Hanmakonda and Kazipet (Tri-city) is the fourth largest urban agglomeration in the state next to Hyderabad, Visakhapatnam and Vijayawada. But there has not been any other major town developed except that of Janagaon in the district. Small towns like Mahabubabad and Dornakal in the districts have not been shown any rapid growth. But the recent spurt in urban growth in the district as well as in the state mostly owing to emerging Census towns<sup>4</sup>. The number of statutory town (two) has not been increased in the district.

**Figure 3.1: Urbanisation (%) in Warangal District and the State**



**Note:** Urbanisation – Percent of Urban population to the total population.

**Source:** Census of India.

When explored the factors behind the low degree of urbanization in the district, one of the reasons could be that when we see urbanization in association with commercialization of agriculture wherein towns evolves with the development of input and output marketing of agricultural activities (agri-business), Warangal district may be lagging behind. However, over period the area cultivated under commercial crops like Cotton, Chillies and Turmeric has been increasing. Warangal agricultural market is the one of the largest regulated in the state. The second reason could be that the district's proximity to the state's Capital City. The growth of strong urban centre like Hyderabad and Warangal City itself factors out the growth of towns in the peripheral.

<sup>4</sup> One may refer to the Census classification of Census Town based on the Census criterion.

**Table 3.3: Size of the Rural and Urban Population in Warangal District and the State**

Year	Rural Population (in Lakhs)			Urban Population (in Lakhs)		
	Warangal	State	% of Warangal	Warangal	State	% of Warangal
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1961	-	297.1	-	-	62.7	-
1971	-	351.0	-	-	84.0	-
1981	19.04	410.6	4.6	3.96	124.9	3.2
1991	22.72	486.2	4.7	5.47	178.9	3.1
2001	26.23	554.0	4.7	6.23	208.1	3.0
2011	25.20	563.6	4.5	9.92	282.2	3.5

**Note:** population in lakhs.

**Source:** Census of India.

The third factor could have been that the development of towns in hinterland of the district Maoist movement. This factor could be nullified when one compares the urbanization pattern of Adilabad district which is also one of the Maoist movement infested districts in the state. In Adilabad district there are more than 15 towns evolved in the district over a period of time and most of them are associated with commercialization and agriculture and the agri-business.

Notwithstanding, the recent spurt in urban growth mostly owing to emerging census towns could be explained through rapid increasing rural infrastructure in terms of roads and transportation, communications especially since late 1990s. Such in increase infrastructure base increased the access to market expanded the base of commercialization and enhanced the non-agricultural activities.

### ***3.4 Social and Religious Groups***

The composition of the population by social groups (Caste) in the Warangal district indicates that about 17 per cent of the district population belonging to Scheduled Caste (SC) and about 14 per cent of the population belonging Scheduled Tribe (ST). The share of SC and ST population in district as well as in the state has shown a marginal increase over time (Figure 3.2). When compared with the state average (6%), the share of ST population in the district's total population it is almost twice that of the state average. Warangal is the third largest district in the state in terms of the size of the ST population next to Khammam and Visakhapatnam. In terms of the share of ST population to the district's total population, Warangal is having fourth highest share next to Khammam, Visakhapatnam and Adilabad. In respect of SC population Warangal stands at 13<sup>th</sup> position.

With respect to the composition of religious groups, a larger proportion of the population in the district (93.3%) belonging to Hindu religion, 5.5% of the population are Muslims, just 1% of the population belonging to Christianity and then the presence of any other religious groups is very much negligible in the district (Figure 3.3). When compared to the state average the share of Hindus is higher and the share of Muslim and the Christianity in the district population is lower.

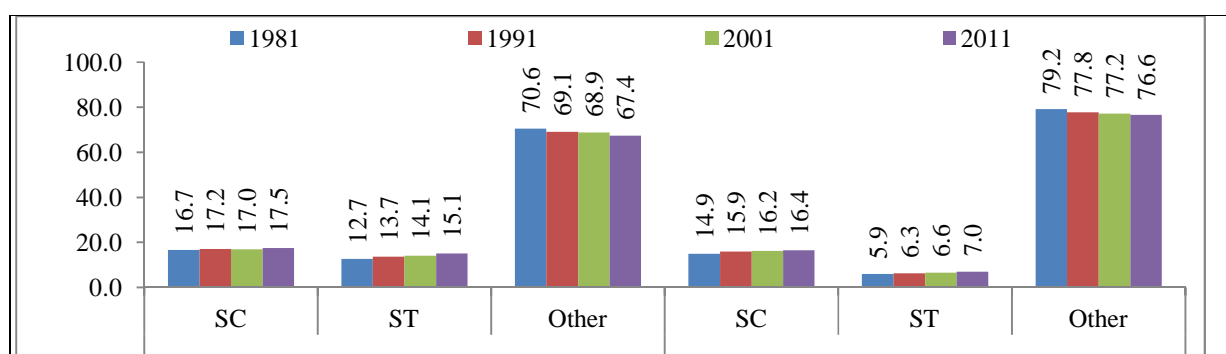
**Table 3.4: Size of the SC and ST Population in Warangal District and Andhra Pradesh**

Year	SC Population (in lakhs)			ST Population (in lakhs)		
	Warangal	State	% of Warangal	Warangal	State	% of Warangal
1	2	3	4	5	6	7
1961	-	49.74	-	-	13.24	-
1971	-	57.75	-	-	16.58	-
1981	3.84	79.62	4.82	2.93	31.76	9.23
1991	4.85	105.92	4.58	3.85	41.99	9.17
2001	5.51	123.39	4.47	4.58	50.24	9.11
2011	6.16	138.78	4.44	5.31	59.18	8.97

**Note:** Population in lakhs.

**Source:** Census of India

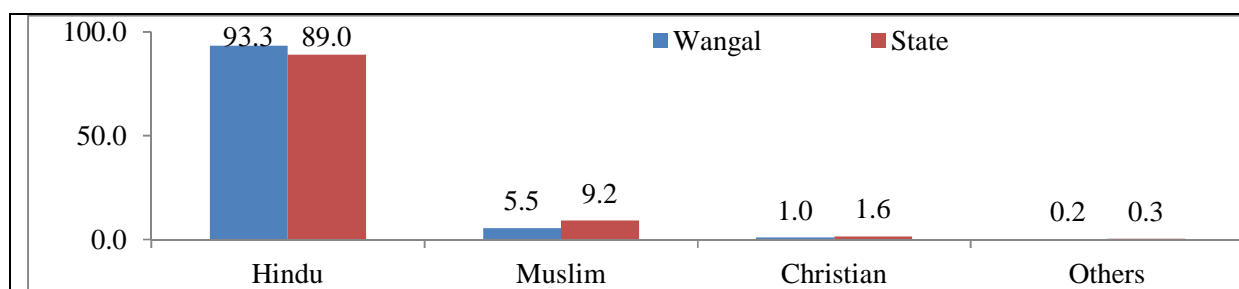
**Figure 3.2: Share of SC/STs in the Total Population of Warangal and Andhra Pradesh**



**Note:** Share is in percentage form.

**Source:** Census of India.

**Figure 3.3: Share of Religious Groups in Warangal District and in Andhra Pradesh, 2001**



**Note:** Share is in percentage form.

**Source:** Census of India.

#### IV Economy of Warangal District

Before proceeding to the analysis of the district economy, one has to note, the district level income figures in respect of Gross District Domestic Production (GDDP) is being processed for the years since 1993-94. Prior to 1990s we do not have any information on district income. The size of the district's economy indicated by Gross District Domestic Product (GDDP) shows that size of the economy of Warangal district is doubled similar to the size of the state economy, during the last one and half decade period (between 1993-94 and 2007-08). In this period, both the GDDP of Warangal and the GDP of Andhra Pradesh have increased by 2.6 times of the value in 1993-94. The GDDP of Warangal district has increased from Rs. 292676 lakhs in 1993-94 to Rs. 768161 lakhs in 2007-08. The GDP of Andhra Pradesh has increased from Rs. 9103698 lakhs in 1993-94 to Rs. 23937200 lakhs in 2007-08.

The districts contribution (i.e % of GDDP of Warangal to the GDP of Andhra Pradesh) to the economy of the state has been around 3.2% only. The district's contribution (3.2%) to the state economy is lower than that of its share (4.3%) in the total population in the state. As the size of the district's economy doubled the per capita income (GDDP) also doubled during the last one and half decade period (between 1993-94 and 2007-08). In this period, both the per capita GDDP of Warangal and the per capita GDP of Andhra Pradesh have increased by 2.2 times of the value in 1993-94. The per capita GDDP of Warangal district has increased from Rs. 9036 in 1993-94 to Rs. 19970 in 2007-08. The PCGDP of Andhra Pradesh has increased from Rs. 13070 in 1993-94 to Rs. 29174 in 2007-08. The relative level of per capita income of the district to that of the state's average indicates that it is significantly lower: Warangal's PCGDDP is 68% of the state average (PCGDP) in 2007-08.

**Table 4.1: Gross Domestic Product (GDP) of Warangal District and Andhra Pradesh**

Year	GDDP (Rs. In Lakhs)			Per Capita GDDP (in Rs.)		
	Warangal	State	% of Warangal	Warangal	State	% of Warangal
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1993-94	292676	9103698	3.2	9036	13070	69
1994-95	326253	9659580	3.4	9971	13651	73
1995-96	322287	10278879	3.1	9631	14315	67
1996-97	365846	10978010	3.3	10905	15087	72
1997-98	326727	10878247	3.0	9410	14772	64
1998-99	436255	12257868	3.6	12620	16474	77
1999-2000	423743	12879712	3.3	12081	17076	71
2000-01	498586	13931198	3.6	14142	18320	77
2001-02	494811	14518528	3.4	13894	18968	73
2002-03	475717	14914248	3.2	13014	19192	68
2003-04	555004	16308519	3.4	15146	20745	73
2004-05	543735	17637874	3.1	14614	22185	66
2005-06	646652	19443678	3.3	17189	24193	71
2006-07	688368	21613967	3.2	18122	26612	68
2007-08	768161	23937200	3.2	19970	29174	68

**Note:** In Constant (1999-2000) Prices.

**Source:** Directorate of Economics and Statistics, Hyderabad.

The sectoral distribution of GDDP of Warangal shows that while the share of agriculture is declining, there is a corresponding increase in the share of both the industry and service sector. The share of agriculture in its GDDP has declined from 36% in 1993-94 to 28% in 2007-08. The share of industry and services sector in the GDDP of Warangal has increased from 20% and 44% in 1993-94 to 24% and 42% in 2007-08 respectively. When compared the sectoral distribution of GDDP of Warangal with that of the state GDP, the decline in the share of agriculture is much sharper in the state GDP.

When examined the growth of the GDDP of Warangal by sectors, agriculture sector has shown a high growth especially during 1990s and industry has shown higher growth during the last eight years (i.e. between 2000-01 and 2007-08). The growth of overall GDDP of Warangal district is increasing over a period of time; it has increased from 7.3% during 1990s (1993-94 to 1999-00) to 8.1% during the last eight years period (2000-01 to 2007-08).

**Table 4.2: Sectoral Distribution (%) of GDDP of Warangal District**

Year	Warangal			Andhra Pradesh		
	Agriculture	Industry	Services	Agriculture	Industry	Services
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1993-94	35.8	19.8	44.4	36.1	23.4	41.1
1994-95	37.7	19.4	42.9	33.6	24.6	42.1
1995-96	33.2	21.6	45.2	33.4	24.4	42.6
1996-97	37.9	18.3	43.9	33.2	23.8	43.3
1997-98	25.6	25.0	49.5	27.9	25.5	46.4
1998-99	36.5	20.8	42.7	31.0	23.9	45.2
1999-2000	33.2	17.9	48.9	28.8	23.8	47.4
2000-01	36.2	17.6	46.2	30.2	22.6	47.2
2001-02	31.4	19.8	48.9	28.5	22.7	48.8
2002-03	25.2	21.8	52.9	25.6	23.9	50.5
2003-04	30.5	19.5	50.0	26.9	23.2	49.8
2004-05	23.6	22.1	54.3	26.0	24.1	49.9
2005-06	29.3	22.1	48.6	25.7	24.7	49.6
2006-07	27.9	22.1	50.1	23.7	26.2	50.1
2007-08	28.2	23.6	48.2	25.0	26.1	48.8

**Note:** In Constant (1999-2000) Prices.

**Source:** Directorate of Economics and Statistics, Hyderabad.

The annual average growth of GDDP of Warangal by sectors during the last one and half decade period (1993-94 to 2007-08) shows that agriculture sector has registered the highest growth followed by the Industry whereas the service sector has registered the relatively lower growth.

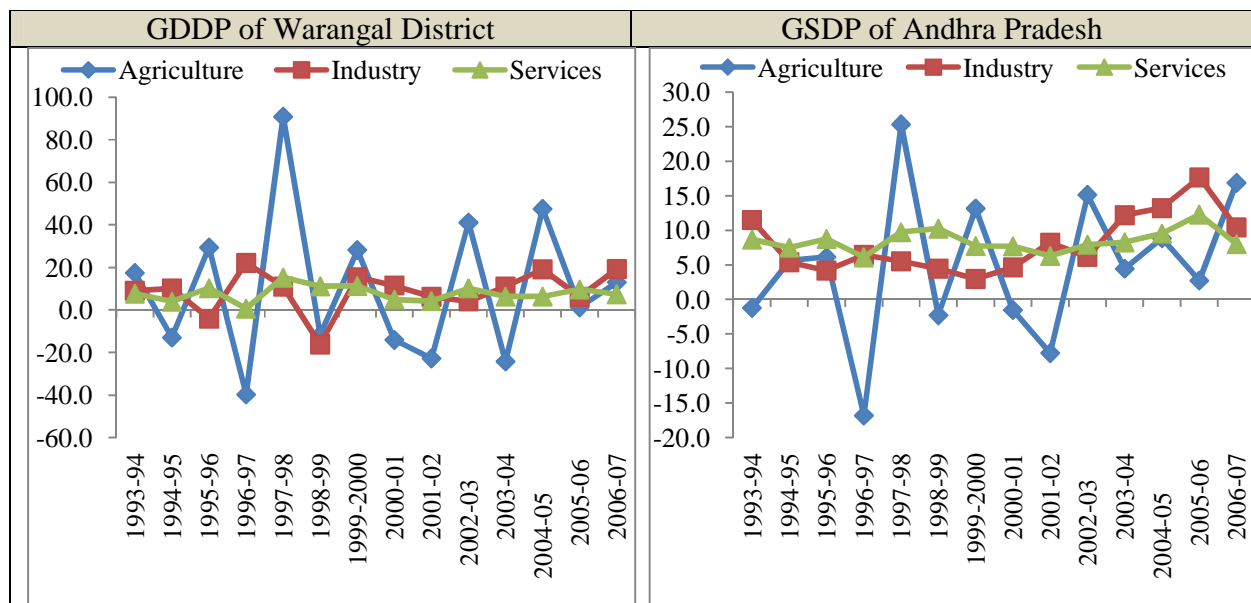
When compared with state average, growth of GDDP of Warangal is higher during 1990s and it is almost equal during the recent period. In the state economy (GDP of AP), agriculture sector has registered the relatively lower growth but services sector followed by the industry has registered the highest growth.

**Table 4.3: Growth of GDDP of Warangal District and Andhra Pradesh**

Year	Warangal			Andhra Pradesh		
	1993-94 to 1999-2000	2000-01 to 2007-08	1993-94 to 2007-08	1993-94 to 1999-2000	2000-01 to 2007-08	1993-94 to 2007-08
1	2	3	4	5	6	7
Agriculture	12.2	8.8	10.3	2.8	6.5	4.9
Industry	5.4	11.6	8.9	6.2	9.4	8.1
Services	8.2	7.6	7.8	8.5	8.5	8.5
GDP	7.3	8.1	7.7	6.0	8.1	7.2
PCGDP	6.0	6.9	6.5	4.6	7.0	6.0

**Note:** In Constant (1999-2000) Prices.

**Source:** Directorate of Economics and Statistics, Hyderabad.

**Figure 4.1: Variation in the Growth of GDDP by Sectors**

**Note:** Year to year growth (%).

**Source:** Computed using DES data

The growth pattern indicates that for district economy growth of agriculture is the main source of overall growth whereas for the state economy the growth of non-agriculture sector is the main source of the growth. However, year-to-year annual growth indicates that there is higher level of variation in the growth of GSDP of agriculture sector when compared to that of non-agriculture sectors in both the state economy as well as the district economy. These high fluctuations in the growth of agriculture GDDP must be associated with changing agro-climatic conditions like rainfall, drought, floods etc.

## V Employment

One of the objectives of the economic development of any economy is creating livelihood opportunities and employment generation for those living within the economy. When examined the employment potentials of the Warangal district's economy, its Work Participation Rate (WPR) shows that about 48.6% of the district population in 2011 is engaged/working in one or the other economically gainful activity (Table 5.1). There has been a marginal increase in WPR of Warangal district during the last three two decades. The WPR of the Warangal district is has always been higher than that of the state average. The workforce of the district Warangal forms about 4.5% of the total workforce in the state. The contribution of the Warangal district to the total workforce in the state is marginally higher than its contribution to the total population of the state. In terms of the size of workforce, Warangal district stands at 13<sup>th</sup> position among the 23 district in the state.

The growth of workforce in the district as well as in the state was highest during 1980 (at around 2%) and thereafter it decelerated during 1990s (to 1.5%) and the 2000s (see Table 5.1). The growth of workforce in the district as well as in the state was almost same during 1980s and 1990s. But for the last decade (between 2001 and 2011), the growth of workforce in Warangal district (0.86%) is lower than that of that of state average (1.2%).

**Table 5.1: Growth of Workers in Warangal District and Andhra Pradesh**

Year	Warangal District				Andhra Pradesh		
	WPR	Workers	% in State	Growth	WPR	Workers	Growth
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>		<i>5</i>	<i>6</i>	<i>7</i>
1981	47.8	10.99	4.5	-	45.8	245.1	-
1991	47.8	13.46	4.5	2.05	45.0	299.6	2.03
2001	48.2	15.65	4.5	1.52	45.8	348.9	1.54
2011	48.6	17.06	4.3	0.86	46.6	394.2	1.23

**Note:** 1. **WPR** – Work Participation Ratio presented in percentage form; 2. **Workers** are in lakhs; 3. **Growth** – Compound annual growth rate (CAGR) presented in percentage form; 4. Workers include both Main and Marginal workers.

**Source:** Census of India.

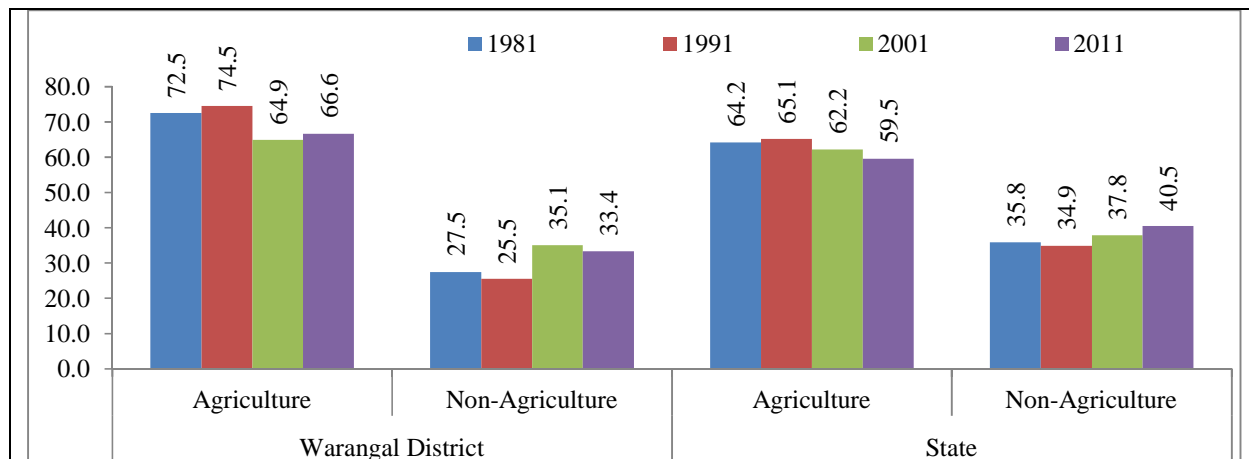
The percentage distribution of the total workforce between agriculture and non-agricultural activities shows that in Warangal district around 67% of the district workforce is engaged in agricultural activities in 2011 (Figure 5.1). When compared to the state average the share of agricultural activities in the district's workforce is distinctively higher. The share of agriculture is declining with a corresponding increase the share of non-agriculture in the total workforce of the district during the last two decades of the 20<sup>th</sup> century. But, during the last decade (between 2001 and 2011), alarmingly, the share of agriculture in the district's total workforce has increased. Whereas the state average with respect to share of agriculture, shows that there is continuous decline during the last three decades. Such a distribution pattern indicates the primacy of agriculture as a livelihood source for the district population/workforce.

Moreover, within the workforce that engaged in agricultural activities in the district Warangal, around 40% of them are cultivators depending self-cultivation and the rest (60%) of them are to engage in agricultural activities as a casual labourers for daily wages (Figure 5.2). In other



words, around 40% of the total workforce in the district is dependent on agriculture labour as their livelihood source. Although the decelerated growth of total workforce in the district and state is not a much worrisome because it follows the trend of decelerated growth in population, the worrisome trends is the increasing dependence on agriculture observed in the district.

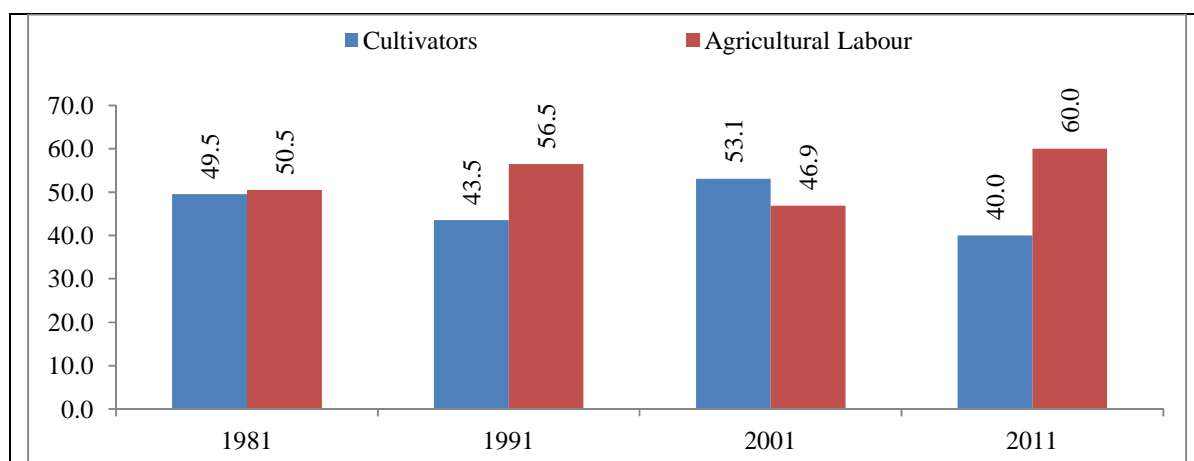
**Figure 5.1: Distribution (%) of Workforce in Warangal District and Andhra Pradesh between Agriculture and Non-Agricultural Activities**



**Note:** 1. Only main workers are considered; 2. Percent of the main workers.

**Source:** Census of India.

**Figure 5.2: Distribution (%) of Workforce in Agriculture between Cultivators and Agricultural Labourers, Warangal District**



**Note:** 1. Only main workers are considered; 2. Percent of the main workers.

**Source:** Census of India.

## VI Agriculture

From the above analysis in section IV, it is observed that growth of the agriculture is main source of the growth of overall economy of the Warangal district. The analysis in the previous section (V) has shown that agriculture has the main source of the livelihood and employment for a majority in the district. The following is the analysis of the changing agrarian economy of the Warangal district.

### 6.1 Land Utilization

The major soil types found in the Warangal District are red *chalka* (55%), black cotton soil (22%, loamy soil (14%), and sandy loams (9%). Of the total geographical area (1.2 million hectares) of the district 29% is considered as forest area. The percentage of forest in Warangal district is higher than that of the State average (22.6%). Barren land and the land put to non-agricultural use in Warangal district (4.1% and 4.7% respectively in 2008-09) as a percentage of its geographical area is lower when compared to that of the state average (7.5% and 9.7%). The percentage of permanent pastures in the district is higher than the state average. But the proportion of cultivable waste, other fallows and current fallows put together it found to be the proportion in the district geographical area (around 18% in 2008-09) is relatively higher when compared to the state average (around 17%).

**Table 6.1: Land Utilisation in Warangal District and Andhra Pradesh**  
(Percentage Distribution of Geographical Area)

Sno	Particulars	Warangal					Andhra Pradesh				
		1990-91	1995-96	2000-01	2005-06	2008-09	1990-91	1995-96	2000-01	2005-06	2008-09
1	2	3	4	5	6	7	8	9	10	11	12
1	Forest Area	28.9	28.9	28.9	28.9	28.9	22.8	22.8	22.6	22.6	22.6
2	Barren Land	4.4	4.1	4.2	4.2	4.1	7.6	7.6	7.7	7.6	7.5
3	Land put to Non-Agri. use	4.2	4.6	4.6	4.6	4.7	8.4	8.9	9.2	9.5	9.7
4	Permanent Pastures	3.9	4.0	3.9	3.9	3.5	3.1	2.8	2.5	2.5	2.1
5	Misc. Trees	0.4	0.3	0.3	0.3	3.9	1.0	0.9	1.0	1.0	1.1
6	Cultivable Waste	1.7	2.9	2.6	2.6	0.9	2.8	2.7	2.7	2.5	2.4
7	Other Fallows	2.9	16.7	9.1	8.6	8.3	5.0	6.0	5.2	5.9	5.4
8	Current Fallows	19.0	8.4	5.2	8.8	8.9	9.1	9.3	8.4	8.9	9.6
9	Net Area Sown	34.5	30.1	41.1	38.1	35.2	40.2	38.8	40.5	39.5	39.9

**Note:** Figures presented in the above table are percentages- percentage in the geographical area.

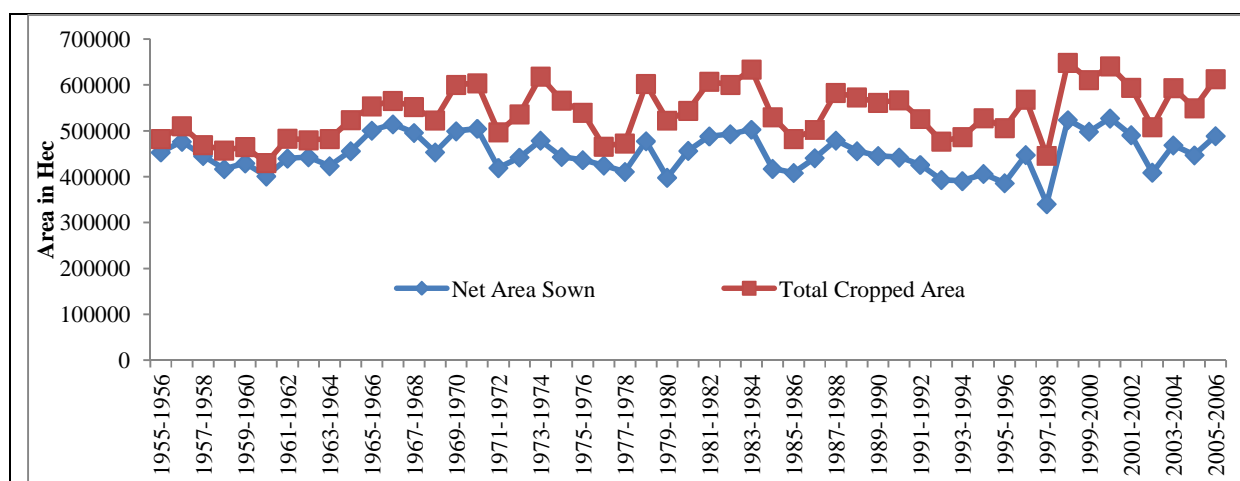
**Source:** Directorate of Economics and Statistics, Hyderabad.

With respect to the net sown area (NSA) as percentage of geographical area, it varied between 30 to 40% in the Warangal district depending up the weather conditions (Table 6.1). When weather (rainfall) was fourable 2000-01 the NSA in the district was around 41%. In contrast, it was only 30% in 1995-96 when weather (rainfall) was not favourable for cultivation. When compared to the state average, net sown area in Warangal district as a percentage of its geographical area is lower. It is also observed that NSA is highly fluctuating in the district over the years, whereas the state average has not such volatility in sown area.

## 6.2 Cropping Intensity

The net area sown (NSA) in the Warangal district has been fluctuating between four lakh to five lakh hectares during the last five decade period (between 1955-56 and 2005-06), mostly stagnant around 4.5 lakh hectares. But as the cropping intensity (as the area cultivated more than once) in the district has increased (Figure 6.3), there is noticeable increase in the gross cropped area (GCA) from 4.8 lakh hectares in 1955-56 to 6.1 lakh hectares in 2005-06. However much of the increase in cropping intensity and thereby the GCA, had taken place during 1950s and 1960s. By 1970s the GCA of the district had saturated. The cropping intensity in the Warangal district is found to be higher than the state average but highly volatile than the state average (Figure 6.3). The volatility in cropping intensity in the district is observed since 1970s and continued till 1990s. Thereafter during 2000s, volatility of cropping intensity is moderated. Although early 2000s had witnessed a rise in both the NSA and GCA it could not sustain thereafter. There was a sever draught took place during 2003-04, it affected cultivation only in Warangal district but many parts of state as well as the country. Such a fluctuation/volatility in NSA and GCA reflects the unreliable changing weather conditions affects district's agriculture. Although area under irrigation, as we can observed in proceeding analysis, is increasing much it is under tank and ground through (Well or tube well) irrigation systems which too are dependent on rainfall.

**Figure 6.1: Net Area Sown and Total (Gross) Cropped Area in Warangal District**

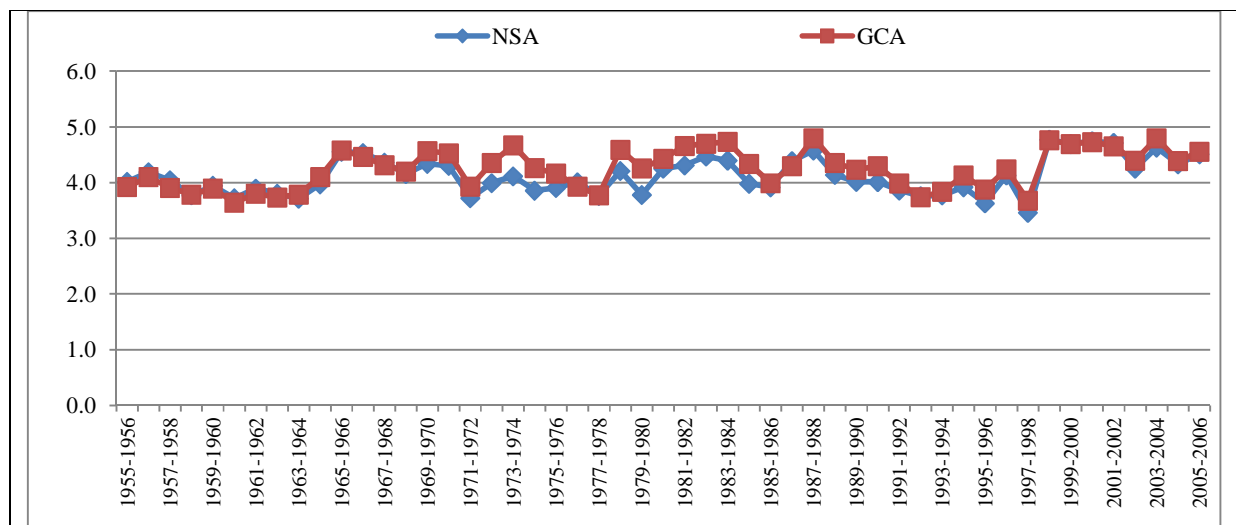


**Note:** Area in Hectares.

**Source:** Directorate of Economics and Statistics.

The share of the district in the state in respect of NSA and GCA had increased during the 1950s and 1960s and remain stable during 1970s and 1980s (Figure 6.2). Contribution of Warangal district to the state in respect of GCA found to be higher than its contribution to the state in respect of NSA particularly during 1970s and 1980. This is the period where the cropping intensity in the district was high and found to highly fluctuating/volatile (Figure 6.3). Thereafter in 1990s, the district's share in the state in respect of both the NSA and GCA has declined. But period during the 2000s witnessed a rise in NSA and GCA of the Warangal district, so the share of district in the state has increased.

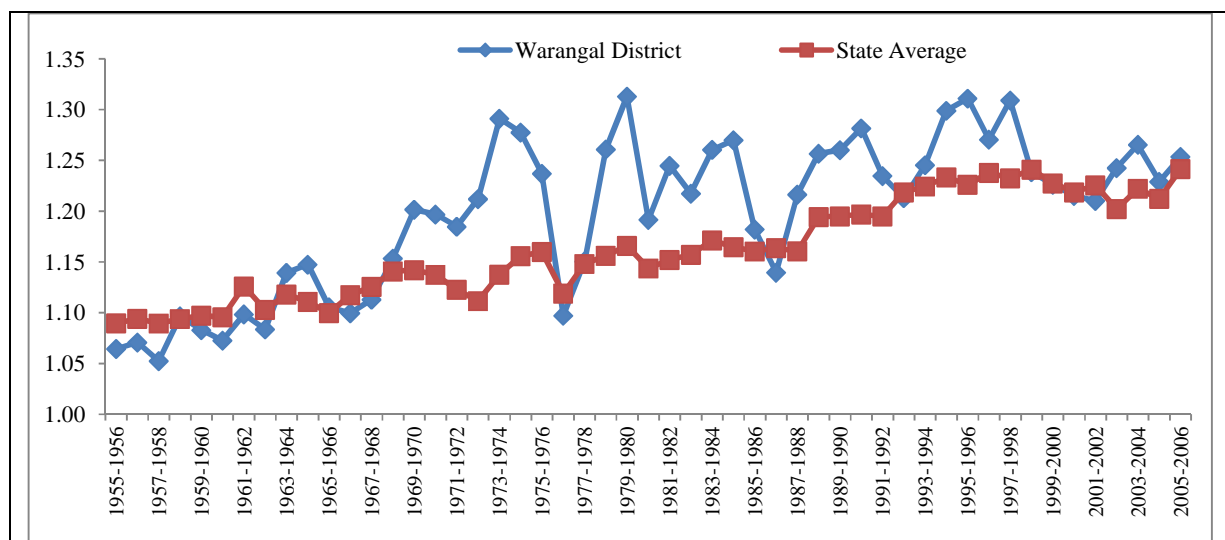
**Figure 6.2: Share (%) of Warangal District in the State in respect of NSA and GCA**



**Note:** NSA – Net Sown Area; GCA – Gross Cropped Area.

**Source:** Directorate of Economics and Statistics.

**Figure 6.3: Cropping Intensity in Warangal District**



**Note:** Cropping intensity is ratio of gross cropped area to the net sown area.

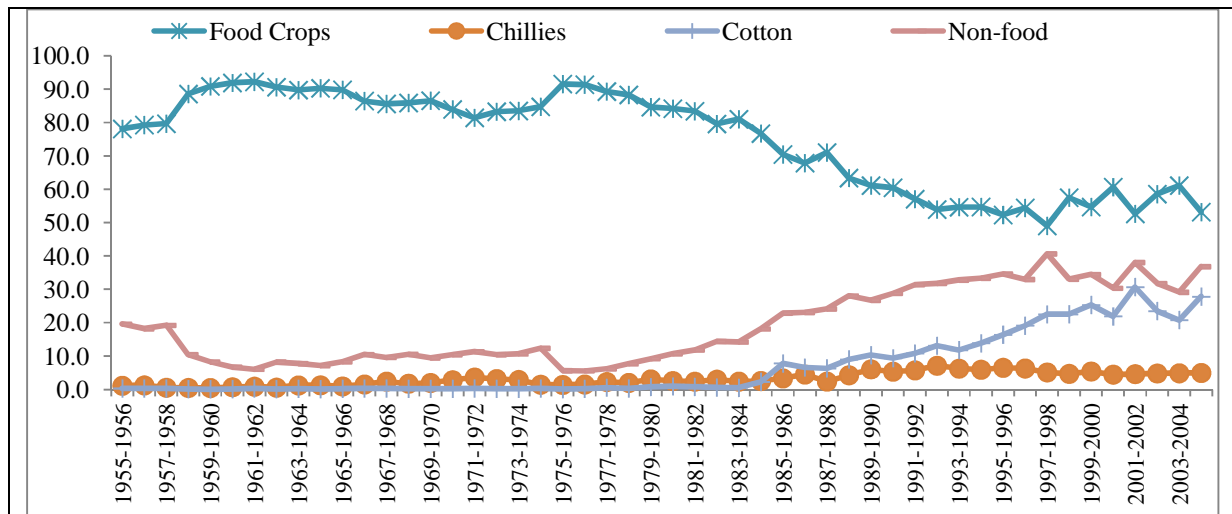
**Source:** Directorate of Economics and Statistics.

### 6.3 Cropping pattern

The cropping pattern in the Warangal district shows that there is sharp decline in area under cultivation of food crops as a percentage of total (gross) cropped area (GCA) and correspondingly there is a sharp increasing in the non-food crops during the last five decades period (see Figure 6.4). Such a sharp decline in share of food crops observed till mid-1990s and

thereafter a trend of marginal increase. Thus since mid-1990s, the trend shows that the shares of food and non-food crops have not shown any remarkable increase or decrease; rather the shares of food and non-food crops are and thereby cropping pattern is stabilized (see Figure 6.4).

**Figure 6.4: Share (%) of Food and Non-food Crops in the Total Cropped Area in Warangal District**



**Note:** Figure indicates percentage distribution.

**Source:** Directorate of Economics and Statistics.

**Table 6.2: Cropping Pattern in Warangal District and Andhra Pradesh – Percentage Distribution of Gross Cropped Area (GCA)**

Sno	Particulars	Warangal					Andhra Pradesh				
		1990-91	1995-96	2000-01	2005-06	2010-11	1990-91	1995-96	2000-01	2005-06	2010-11
1	2	3	4	5	6	7	8	9	10	11	12
1	Paddy/Rice	33.1	26.8	35.1	32.9	37.7	30.6	28.3	31.3	29.8	32.7
2	Total Cereals and Millets	44.7	38.4	46.6	47.1	47.8	46.5	40.5	42.6	40.3	40.6
3	Total Pulses	14.3	11.2	10.2	8.7	8.1	12.4	12.4	14.0	13.3	14.7
4	Total Food Grains	59.0	49.6	56.9	55.7	55.9	58.8	52.9	56.7	53.6	55.3
5	Total Food Crops	60.5	52.3	60.7	60.1	59.8	65.5	61.9	66.9	64.6	65.7
6	Chillies	5.4	6.5	4.5	3.6	2.9	1.6	1.6	1.8	1.3	1.3
7	Cotton	9.4	16.4	21.9	24.7	32.1	5.0	8.1	7.5	7.7	12.3
8	Total Fibers	-	-	22.0	24.8	32.1	-	-	8.2	8.2	12.5
9	Groundnut	18.2	15.0	7.6	6.9	4.2	18.1	17.0	13.8	14.0	11.2
10	Total Oilseeds	-	-	12.8	11.3	5.1	-	-	20.9	22.8	17.0
11	Total Non-food Crops	39.5	47.7	39.3	39.9	40.2	34.5	38.1	33.1	34.1	32.9

**Note:** 1. Figures presented in the above table are percentages- percentage in the gross cropped area; 2. ‘-’ could not the information.

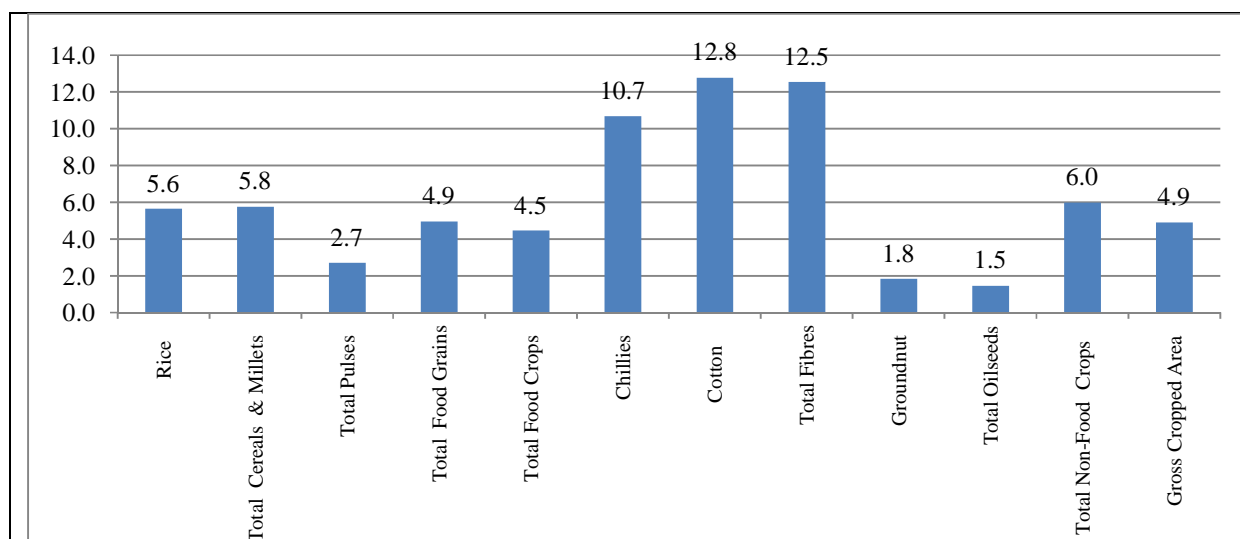
**Source:** Directorate of Economics and Statistics, Hyderabad.

Among the food crops, the area under cultivation of rice occupies significant proportion of total cropped area in the Warangal district. Rice crop occupies about one-third of the total cropped

area in the district (see Table 6.2). Among the non-food crops, share of area under cultivation of chillies and cotton as a percentage of total cropped area in the district is increasing (see Figure 6.4 and Table 6.2). Cotton has occupied about one-fourth to one-third of the total cropped area in the district. As a result of the intensity of cotton crop cultivation in the district, Warangal Cotton Market emerged as the second largest in the state next to that of Guntur. Cultivation of chillies also occupies considerable proportion of cropped area in the district. Warangal is one of the few districts in Andhra Pradesh that are predominant ones in cotton and chillies cultivation at least for the last two decades. As a result of increasing area under emerging non-food crops like cotton and chillies, other traditional non-food crop such as groundnut is losing its prominence in the district. Area under these two crops in the district forms about 11% and 13% respectively, area under these two crops in the state (see figure 6.5).

When compared with the state average, shares of area under food and non-food crops cultivation as a percentage of total cropped area in the state, the share of area under food crop cultivation as a percentage of total cropped area in the district is higher and vice versa for the non-food crops. However, there has not been any drastic change in distribution area under food and non-food crops in the Warangal district and the State. Rather there must be changes in the distribution of area under different crops within the food and non-food crops groups. For instance decline in area under pulses among the food crops in the Warangal district; decline in area under groundnut and corresponding increase in cotton among the non-food crops in the districts. Similarly, one can observe such a trend in the state as a whole. Warangal district is over representing in the state in respect of non-food crops especially cotton and chillies, and under representing in food crops particularly that of pulses (see Figure 6.5).

**Figure 6.5: Share (%) of Warangal District in the State in respect of area under different crops, 2010-11**



**Note:** in percent.

**Source:** Directorate of Economics and Statistics, Hyderabad.

#### **6.4 Structure of Agrarian Economy**

As Warangal district was part of Nizams' Hyderabad state, the district also encompasses all the characteristics of development in this State during the pre-independent period and characteristics of Telangana region during post-independence period. The agrarian economy was backward given its structure and relations during the Nizams rule. The adverse agrarian relations under the Nizam's rule in fact resulted in the great 'Telangana Peasant Armed Struggle' during 1946-50 (Pavier, 1978; Ram, 1977). Warangal district too witnessed such an aggressive struggle. As a result the state policy intervention through an agrarian programme, millions of acres of land was re-distributed, *vetti* was abolished, agricultural wages were set at a reasonable level (see Ram, 1977). It took place many parts of Telangana regions and the Warangal district. However, the gains made through the struggle were reverted back during early years of post-independent period when it (the struggle and the state policy intervention) was totally withdrawn without giving protection to beneficiaries. This kind of policy apathy towards restoration of adverse agrarian relations attracted and paved the way emerging Naxalbari movement in Western parts of India during the 1970s. The haphazard manner of implementing land reforms and setting right the agrarian relations during 1960s and 1970s lead to aggressive movement 1980s.

The threat of Naxal movement led the state to co-opt agrarian issues and challenges once again into their agrarian programme (Revathi and Galab, 2009; APHDR, 2007). In this context, one has to note that there are two factors played role improving agrarian relations Telangana region. They were state policy - implementation of land reform from the above (through state legislation), and peasant struggles from the below - i.e. under the banner of communist parties especially CPIML known as Naxal moment (Papi Reddy, 1990). As a result, in Telangana's agrarian economy, there are significant changes in terms of its structure, relation and growth especially since 1970s, and it is a watershed point where the dynamism was infused in the agrarian economy of the region. Better agrarian relations were established via state and people's action. Therefore, one cannot ignore the role of Naxalite movement which acted catalyst factor in setting the Telangana's agriculture on growth path since 1970s, especially in absence of pro-active role of the State (ibid). As result the structure of agrarian economy is tilting towards small and marginal farmers in the region.

Warangal district too has witnessed all these changes. The structure of the agrarian economy indicated by the size class of the landholdings and area operated by these size classes shows that more than two-thirds of the total number of landholding in the Warangal district are marginal holdings (below one hectare) but the area operated under the marginal holding class is only around one-fifths of the total area operated in the district. The small and marginal classes are put together their share in the total number of holdings in the district is around 85% and their share in the total operated in the district is 45.8%, around the half of their share in holding. It is also observed that since mid 1990s, there is marginal increase in the share of marginal classes in both the number of holdings and the operated are in the district (Table 6.3).

Distribution of number of holding and operated area in the district by social groups shows that below 10% of the total number of holdings and around 12% of the total operated in the district is under SC community, around 15% of the holdings and 16% of operated area is under the ST community. By size class of the holdings, these SC ST social groups are having higher shares in the small and marginal holdings classes than the higher size classes of holdings (Table 6.4).



**Table 6.3: Structure of the Agrarian Economy in Warangal District – Percentage of Holdings and Area by Size Class of the Holdings and Social Groups**

Size Class	All			SC			ST			Others		
	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
% in Number of Holding												
Marginal	59.5	63.4	63.1	80.3	79.6	80.2	57.3	61.7	62.4	56.4	60.9	60.3
Small	22.5	20.7	20.9	14.7	13.9	13.6	26.3	23.8	23.9	23.1	21.2	21.6
Semi-Med	12.6	10.9	10.7	4.3	4.9	4.4	12.5	10.7	10.3	14.1	12.0	11.8
Medium	4.7	4.2	4.5	0.7	1.4	1.6	3.6	3.4	3.1	5.6	4.9	5.3
Large	0.7	0.8	0.7	0.0	0.1	0.1	0.3	0.4	0.3	0.9	0.9	0.9
All	100	100	100	100	100	100	100	100	100	100	100	100
% in Area Operated												
Marginal	21.6	21.7	22.1	49.1	36.9	42.3	23.8	24.9	26.3	18.8	19.5	19.5
Small	24.2	23.2	23.7	28.9	23.0	25.5	29.8	28.4	29.3	22.8	22.2	22.5
Semi-Med	25.9	23.5	23.3	15.9	15.6	16.0	27.2	24.3	24.3	26.4	24.2	23.8
Medium	20.4	19.5	20.7	5.2	9.6	12.1	15.9	16.3	15.3	22.5	21.1	22.5
Large	8.0	12.1	10.2	0.8	14.9	4.1	3.4	6.1	4.8	9.5	12.9	11.7
All	100	100	100	100	100	100	100	100	100	100	100	100

**Note:** Figures presented in the table are percentages.

**Source:** Directorate of Economics and Statistics.

**Table 6.4: Share of Social Groups in Number of Holdings and Area by Size Class of Holdings, Warangal District**

Size Class	SC			ST			Others		
	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
% in Number of Holding									
Marginal	15.1	14.1	11.9	15.7	15.8	17.7	70.2	70.1	73.9
Small	7.9	8.2	5.3	17.4	16.9	18.6	79.5	74.9	79.8
Semi-Med	4.1	5.5	3.0	14.9	14.2	15.1	90.9	80.3	83.0
Medium	1.7	4.1	4.2	11.0	11.5	11.5	93.0	84.5	94.6
Large	0.7	10.2	2.9	5.9	6.9	5.8	63.4	82.9	79.7
All	6.6	8.3	7.2	14.2	13.7	14.7	80.8	78.0	82.1
% in Area Operated									
Marginal	17.0	15.7	14.4	14.6	14.4	16.0	62.4	69.9	72.5
Small	8.2	8.5	5.5	17.8	17.0	18.8	78.3	74.5	79.5
Semi-Med	4.3	5.7	3.1	15.1	14.4	15.3	90.5	79.9	82.6
Medium	1.8	4.3	4.4	11.6	11.8	12.0	92.5	84.0	95.2
Large	0.7	2.3	2.4	6.5	7.7	7.0	81.7	90.0	92.4
All	12.6	12.5	12.3	15.2	14.8	16.2	70.2	72.7	76.2

**Note:** Figures presented in the above table are percentages.

**Source:** Directorate of Economics and Statistics.

## 6.5 Irrigation Infrastructure

Warangal under Kakatiya's rule was known for the tank irrigation. Large Tanks such as Ramappa, Pakala and Laknavaram has been irrigating thousands of acres in the district. The Sri Ram Sagar Irrigation project on river Godavari is the only largest irrigation project providing canal irrigation to some parts of districts; but its coverage is very negligible. Over time, many of the tiny irrigation tanks have been decayed under different development projects or lack of proper maintenance. As the increasing need for stabilising the crop establishment while withstanding unpredictable rainfall and increasing availability of technology (bore well) the demand for ground water irrigation expanded. Warangal district is one of the few districts in the state that have large tracts of lands irrigated under well (ground water) irrigation. As a result the irrigation infrastructure in the district has expanded.

The irrigation infrastructure i.e. percentage of cropped area irrigated, in the Warangal district appeared to be above than the state average. But most of the irrigation infrastructure in the district is developed with the private investment (i.e. Wells and Tube Wells) out of farmer own capital investment rather than the public investment (Tanks and Canals). During 2008-09, the percentage of the net area irrigated (NIA) to net sown area (NSA) in the Warangal district is around 69% whereas the state average is around 44%. The percentage of the gross area irrigated (GAI) to gross cropped area (GCA) in the district is around 60% whereas the state average is around 48%. Andhra Pradesh is one of those states in India having higher percentage of irrigated area. Within the state Warangal district is one of those district having higher percentage of irrigated area. By the sources of irrigation, Wells are the predominant source of irrigation in the district - area under Well sources of irrigation as a percentage of the total net irrigated are in the districts is the highest. Most of the districts in Telangana region are largely dependent on ground water irrigation (Venkatanarayana, et. al., 2007).

**Table 6.5: Irrigation Infrastructure in Warangal District and Andhra Pradesh**

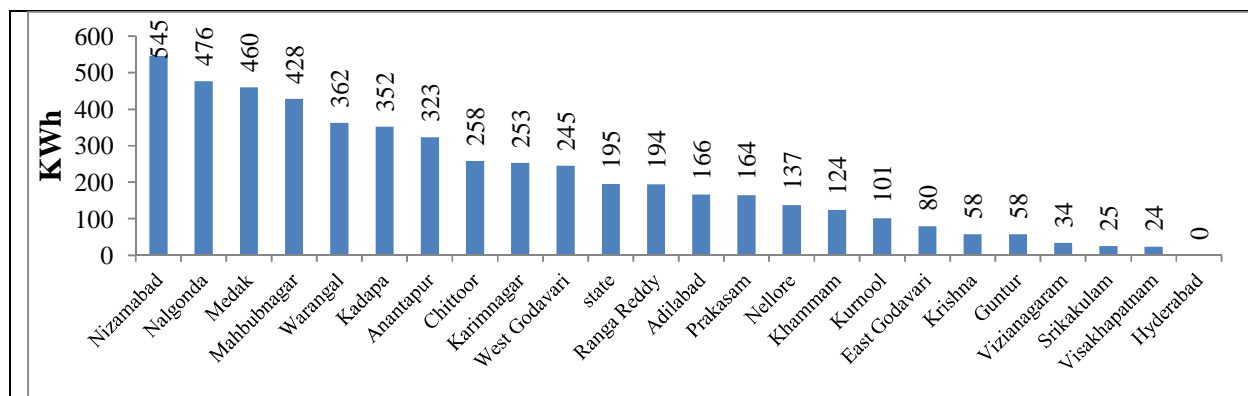
Sno	Particulars	Warangal					Andhra Pradesh				
		1990-91	1995-96	2000-01	2005-06	2008-09	1990-91	1995-96	2000-01	2005-06	2008-09
1	2	3	4	5	6	7	8	9	10	11	12
1	Net Sown Area (lakh Hec)	4.4	3.9	5.3	4.9	4.5	110.2	106.4	111.1	108.4	109.6
2	Net Area Irrigated (lakh Hec)	2.5	2.3	3.1	3.3	3.1	43.1	41.2	45.3	43.9	48.2
3	% of NIA to NSA	57.1	60.0	58.3	66.5	69.1	39.1	38.8	40.7	40.5	44.0
4	Gross Cropped Area (lakh Hec)	5.7	5.1	6.4	6.1	7.4	131.9	130.4	135.5	134.6	139.2
5	Gross Irrigated Area (lakh Hec)	3.0	2.7	3.8	3.9	4.4	53.7	53.0	59.2	60.0	67.4
6	% of GIA to GCA	53.6	52.9	58.6	63.9	60.2	40.7	40.7	43.7	44.6	48.4
Distribution (%) of Net Irrigated Area by Source of Irrigation											
1	Tanks	37.7	25.3	25.4	22.9	23.3	22.5	18.1	16.1	15.1	13.4
2	Canal	1.4	1.1	0.9	0.9	1.1	43.4	37.3	36.4	35.8	34.6
3	Tube Wells	1.5	2.4	8.7	20.9	20.5	6.5	17.2	23.6	30.7	33.4
4	Other Wells	57.5	70.0	63.7	53.7	53.3	23.7	23.0	19.6	14.5	14.8
5	Others	1.9	1.3	1.4	1.6	1.9	3.8	4.4	4.4	3.9	3.7

**Note:** Area is in '000' Hectares.

**Source:** Directorate of Economics and Statistics, Hyderabad.

As the Wells are the predominant source of irrigation in the district, the power consumption in the district is high and increasing over a period of time because energy used for electrical pump sets to lift ground water. Across districts in the state, Warangal district is fifth highest in per capita power consumption for agriculture in the district (Figure 6.6). As most of the districts in the Telangana region are largely dependent ground water source for irrigation, energy (electricity) requirement for lifting ground water is high in the region (Venkatanarayana, *et. al.*, 2007).

**Figure 6.6: Per capita Agricultural Power Consumption (in Kwh) in across Districts in Andhra Pradesh, 2009**



**Note:** Power consumption in KWh.

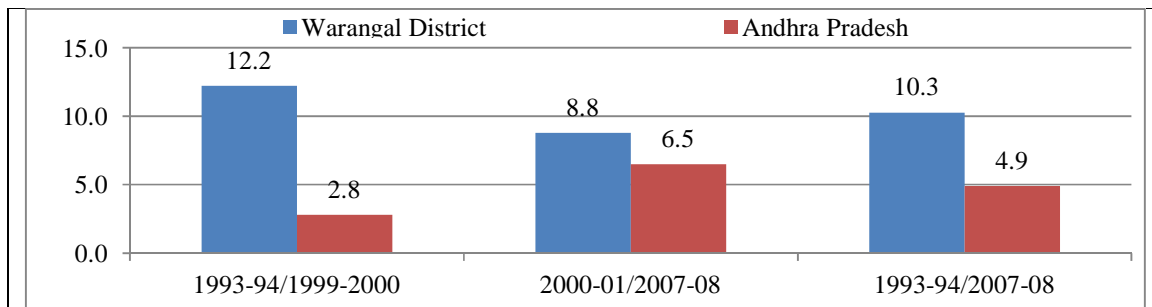
**Source:** Directorate of Economics and Statistics.

## 6.6 Growth of Agriculture

Changes agrarian structure and improved agrarian relations since 1970s, infused the dynamism in the agrarian economy of the district as well as in the Telangana region as a whole. Along with these changes, the improved infrastructure such as irrigation with availability of technology, and road and transportation connecting villages and towns again infused the commercialisation and monetisation elements in the agrarian economy. Cultivation of commercial crops such as cotton and chillies began displacing traditional crops such as cereals like jowar, millets, pulses, and oilseeds like groundnut. Even the paddy crop, cultivation which occupies one-third of the total cropped area in the districts, is also commercialized; a large number of farmers in the district are growing it for market.

In this context, it is observed that rate of growth in value of agricultural (crop) output is relatively higher in Telangana districts including Warangal is higher than the other districts in Andhra Pradesh (Vamsi, 2004). One can also observe that the rate of growth in GDDP of agriculture sector (including crops, livestock, forest and logging, and fisheries) in the district is higher than the state average and registered a 12% growth during 1990s and 8.8% during 2000s (Figure 6.7).

**Figure 6.7: Growth (%) of Agriculture GDDP in Warangal District and the GSDP of Andhra Pradesh State**



**Note:** 1. Annual average growth rate (in %); 2. Gross District Domestic Product.

**Source:** Directorate of Economics and Statistics, Government of Andhra Pradesh, Hyderabad..

Paradoxically, however, Warangal district is also known for the episodes of farmers' suicides indicating agrarian distress in the state Andhra Pradesh as well as in the country during 1990s and 2000s (Mishra and Reddy, 2009; Revathi, 2006). It is also observed that economic growth taking place in the context of Andhra Pradesh especially in Telangana is found to be immiserising growth adversely affected the agricultural labourers in the region (Vamsi, 2005). One of the key factors in farmers' suicides is observed to be their high dependence on ground water irrigation and shift towards commercial crops like cotton and chillies led them explore water (wells/bore wells) and driven them into debt traps. The loss of hope with the failure of capital investment (in sunk wells) and instances of crop failure, to recoup from the debt led them such a decisions (see Revathi, 1998; Sainath, 2004; Venkatanarayana and Jain, 2004; Venkatanarayana and Revathi, 2006).

## VII Industry

Agriculture is the main base of the economy of the Warangal district. Although there has been some kind of industrial development in the district, the momentum is very slow. Azam Zahi Mills, one of the large scale industries set up in the district during the Nizams regime has become an industrial glory of the district in the past. At present coal mining industry of the Singareni Collieries (Bhupalepalle) is one of the large industries that the district is having. A. P. Rayons located at Kamalapur (producing Rayon pulp) is the second major industry in the district. The other three major industries in the district are related to News Paper Printing, Solvent Oil Extraction and Leather Tanning. Besides, Granite industry is one of the major upcoming industrial activities in the district given its rich resource for granite.

Altogether there are about 10 large and medium scale industries in the district. In addition, there are about 92 small scale industries related different industrial activities in the district but most of them are either agro-based or mineral based ones. There are number of small scale agro-based industries such as Rice mills, Dal mills, Oil mills and other food processing industries. Poultry farms, Dairy related units and Cold Storages and Warehousing activities are picking up in the district. Increasing area under cotton cultivation in the district led to setting up cotton ginning, pressing and spinning mills.

**Table 7.1 : Large and Medium Scale Industries in Warangal District, 2008-09**

Sno	Name of the industry	Installed Capacity	Capital Investment (Rs. in Lakhs)	Value of Production	Employment (No.)	
					Male	Female
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	Ballapur Industries Ltd., A.P.Rayons, Kamalapur	98550 M.T.s	510	270 Crores	1300	500
2	Sri Venkata Narsimha Solvent Oils Ltd., Nakkalapalli	75000 M.T.s	9	43 Crores	100	30
3	A.B.K.Publications Ltd., VAARTHA Building, Wgl.,	4.80 Crores	3.04	14.40 Crores	55	20
4	Lamansion Granites (P) Ltd., Arepalli.	75000 Sq. Mtrs.	7.79	13.50 Crores	30	12
5	Singareni Collaries, Bhoopalpalli	13.16 Lakhs	185	131 Crores	7061	600
6	Balaji Stake Industries, Hasanparthy (V&M)	12000 MTs.	4.25	18.00 Crores	80	20
7	Ganesh Industries, Gorrekunta	6000 MTs	1.9	9.00 Crores	40	10
8	Santhosh Industries IDA Rampur	6000 MTs	2.1	9.00 Crores	30	15
9	Balaji Stake Industries, Hasanparthy(V&M), Warangal	12000MTs	7.00	18.00Crores	40	20
10	Wardhannapeta Mahila Parsapara Sahakara Pala Uthpathidarula Sahakara Samithi Ellandu (V) of Wardhannapet (M)	75000Klt	4.56	10.00	20	15

**Source:** District Industry Centre (DIC), Warangal.

On the traditional industrial activity front, there are different traditional industrial activities at the household level in the district especially the Beedi making and Handloom weaving. In Warangal district there are 46 Primary Handloom Weavers Cooperative Societies including 5 Wool Weavers Cooperative Societies, of which 30 societies are working full fledged or intermittently working.

**Table 7.2: Small Scale Industries in Warangal District - 2008-09**

Sno	Category	No. of Units	Capital Investment (Rs in lakhs)	Employment	
				Male	Female
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1	Agro Based	18	1470.85	150	117
2	Food based	23	721.70	130	102
3	Paper based	3	21.70	10	8
4	Mineral Based	24	1542.30	150	141
5	Chemical based	1	35.00	5	
6	Cement based	2	168.00	27	20
7	Plastic based	1	11.00	10	7
8	Mechanical based	4	6.75	25	
9	Automobile based	5	57.00	8	
10	Engineering based	3	33.00	15	
11	Forest based	2	14.40	12	
12	Servicing	6	329.47	27	
<b>Total</b>		<b>92</b>	<b>4411.17</b>	<b>569</b>	<b>395</b>

**Source:** District Industry Centre, Warangal.

The industrial base of the district indicates that the industrial activity in the district has been mostly agro-based and mining based industry.

**Table 7.3: Industrial Base of the District**

Sno	Item	Details
1	2	3
<b>Agriculture</b>		
1	Soil Type	The major soil types found in the district are red chalka (55%), black cotton soil (22%), loamy soil (14%), and sandy loams (9%).
2	Major Crops	Paddy, Cotton, Chillies, Maize, Pulses, Millets etc., <b>Horticulture:</b> Mangoes, Banana, Sweet Orange, Acid Lime, Sapota, Guava, Papaya, Custard Apple, Water melon, etc., Floriculture, Aromatic Medicinal Plants.
3	Base for Agro Processing Industry	Rice, Oil and Dal Mills, Dairy, Cold Storages.
4	Opportunities	Food Processing, Fruit and Vegetable Processing, Warehousing, Cold Storages, Dairy, Cotton ginning, pressing and spinning, Cotton Yarn.
<b>Mineral Base</b>		
1	Mineral Source	Coal, Limestone, Granite, Dolomite, Sand etc.,
2	Mineral Based Industries	Coal, Cement, Granite etc.,
3	Possibilities	Coal based, Cement, Granite.
<b>Industry Base</b>		
1	Total Number of Industries	The District has 10 Large and Medium Industries in Paper, Coal Mining, Granite Slab Polishing and Rice Bran Oil with in investment of Rs.833 Crores.
2	Category of Industries	Coal, Rayon pulp grade, Handloom. There are 46 Primary Handloom Weavers Coop. Societies including (5) Wool Weavers Coop. Societies, of which (30) societies are working / intermittently working.
3	Opportunities	Coal based ancillaries, Engineering, Textiles, Leather related.
<b>Business/Industrial Infrastructure</b>		
1	Connectivity	The district is well connected with the state Capital city Hyderabad through road and rail network.
2	Energy	Two 220 KV, eight 132 KV sub-station, 18 Express Feeders.
3	Industrial Parks/Estates	There are 2 Industrial Estates in the district located at Warangal and Jangaon, One Autonagar at Waragal, and two IDAs at Rampur and Madikonda.

**Source:** CII Andhra Pradesh, Hyderabad.

When examined the industrial activity in Warangal district by working of Factories Registered under Sections 2m(i) and 2m(ii) of Factories Act 1948, based on the Annual Survey of Industry (ASI), the number of factories in the district decline from 650 in 1990-91 to 457 in 2000-01. The decline in number of factories took place during early nineties itself, by 1995-96 there were 438 factories in the district. In fact there was marginal improvement by the end of 1990s over the situation of mid-1990s. However the there has been any decline in the gross /net value of industrial output in the district; rather it has shown a continuous increase over a period. Similarly the total number of workers or employees working in these factories is also showing a continuous increase.

**Table 7.4: Industrial Activity under Factories Act 1948 in Warangal District**

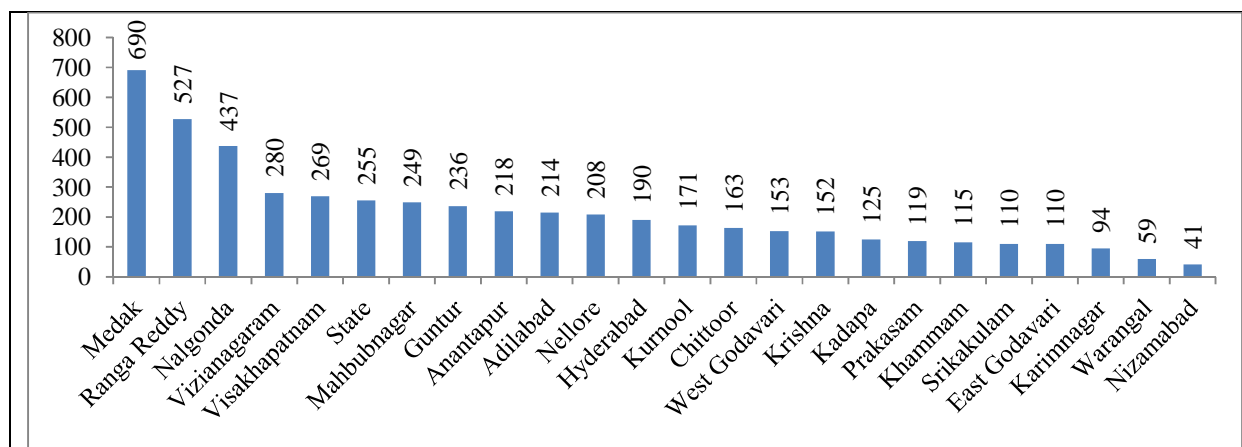
Sno	Details	Warangal			Andhra Pradesh		
		1990-91	2000-01	2005-06	1990-91	2000-01	2005-06
1	2	3	4	5	6	7	8
1	No of Factories	650	457	416	15243	14029	15790
2	Gross Value of Output (Rs. Crores)	40.71	150.20	159.52	3806.36	11061.49	20929.33
3	Net Value Added (Rs. Crores)	32.39	118.07	127.74	2982.01	8862.98	17661.16
4	No of Workers	15652	20540	25032	703786	763892	819703
5	No Employees	17728	22323	27542	837276	907054	972634
6	GVO per Worker (Rs.)	26009	73126	63726	54084	144804	255328

**Note:** Based on the ASI data that refers to working of Factories Registered under Sections 2m(i) and 2m(ii) of Factories Act 1948.

**Source:** 1. ASI; 2. Directorate of Economics and Statistics.

However, if one considers the per capita power consumption for industrial activity especially modern and mechanized in nature is an indicator, district is having second lowest per capita power consumption for the industrial activity in the state next to Nizamabad. It indicates that the district is the industrially backward district in the state.

**Figure 7.1: Per capita Industrial Power Consumption (in Kwh) in across Districts in Andhra Pradesh, 2009**



**Source:** Directorate of Economics and Statistics.

Having second largest city (Warangal) in Telangana region next to the state capital city Hyderabad and located within a 150 Kms distance from Hyderabad, Warangal district is not able reap the development externalities from the growth-centre. One of the reasons for industrial backwardness of the district could be the prevalence of Maoist movement especially in the interiors of the district.



## VIII Economic Infrastructure

Infrastructure (Physical, financial, economic and social) is an important factor for the economic development of a district/region/state/country. Infrastructure expands the size of the market and economic activities and thereby employment opportunity.

### 8.1 Connectivity: Road and Rail Network and Transportation

Physical connectivity between people living in different geographical locations (especially that of rural villages/habitations/hamlets) within the district/state/region through different modes (road, rail and others) would expand the size of the market, mobility of the people and livelihood opportunities.

In Warangal district, about 160 Kms. of railway line passes especially the grand trunk line connecting various cities of northern part of India and that of south India, through the district. It is observed that there has not been any significant increase in the length of the railway line in the district during the last two decades. There are about 20 railway stations in the district, Kazipet is the major railway junction in the district. It is also one of major railway junctions in the state.

**Table 8.1: Road and Rail Network and Transportation in Warangal District**

Sno	Details	Warangal			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
1	Railway line (in Kms.)	160	160	160	5020	5147	5150
2	No of Railway Stations	20	20	20	668	653	670
3	Total Length of the Road (Kms)	6562	8213	9492	133650	168471	198365
4	Total no of Vehicles (nos)	41430	119194	246845	1490664	3984942	7903213
5	Total no of Transport Vehicles (nos)	4410	17521	47531	190920	447021	1458392
6	APSRTC Stage Carriages (nos)	562	774	729	14119	19084	19298
7	Road length per 100 Sq Km of GA	51	64	74	48.7	64.4	72.3
8	Road length per lakh population	232.8	253.0	267.4	201.0	221.0	239.3
9	No of Vehicles per lakh population	1469.8	3672.0	6953.9	2241.3	5227.7	9532.7
10	No of Vehicles per Km of road length	6.3	14.5	26.0	11.2	23.7	39.8

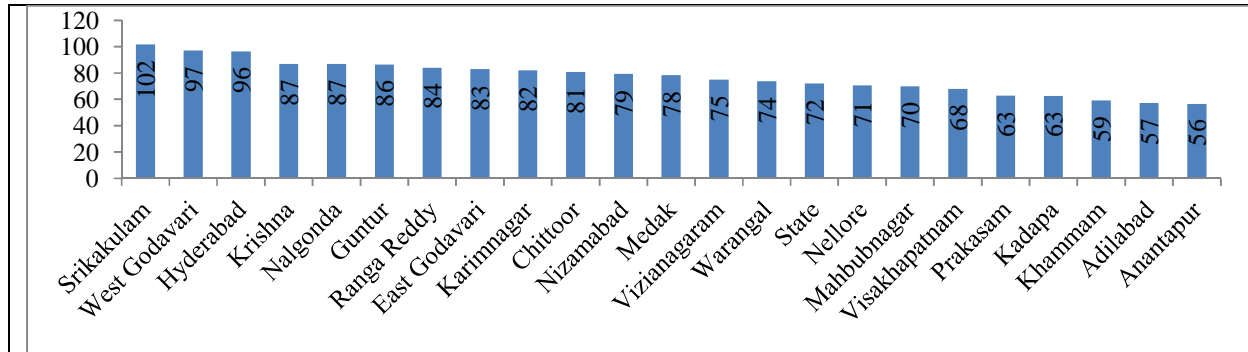
**Note:** Railway line and Road length is in Kilometers; G A – Geographical Area.

**Source:** Directorate of Economics and Statistics.

With respect to the total length of the road laid and available in the district, it has shown a significant increase over a period of time. The length of the road available in the district has increased from 6562 Kms. in 1990-91 to 9492 Kms in 2008-09; the added road length in the district during the last two decades period is around 3000 Kms. Similarly the number of vehicles on road also increased significantly during the last two decades period in Warangal district. The total number of vehicles (including transport and others) on road in the district increased from around 41 thousands in 1990-91 to around 2.47 lakh by 2008-09. Those vehicles useful for the transportation of people, goods and services have increased from around 4 thousands to 47.5 thousands during the period. Stage carriages especially those in public sector are important for carrying people. In this regard Andhra Pradesh State Road Transport Corporation is playing important role in the state. In Warangal District the number of APSRTC buses available for the passenger transportation has increased from 562 in 1990-91 to 774 by 2000-01 but later they

declined to 729 by 2008-09. It could be due to availability of more number of smaller passenger carriers like Auto, Mini Buses, Vans, Jeeps etc.

**Figure 8.1: Road Density (Per 100 Sq. Kms. ff Geographical Area) across Districts in AP**



**Note:** Road density – road net work (in km.) per 100 sq. kms of geographical area.

**Source:** Directorate of Economics and Statistics.

When compared with the state average in terms of road length per 100 square kilometers of geographical area, Warangal district appears to be better. But across districts, Warangal district is one of the lowest (Figure 8.1).

**Table 8.2: Number of Villages in Warangal District by the Availability Road and Transportation Facility**

Facility		2004-05
1		2
Total Inhabited Villages		1003
<b>Road Facility</b>		
Villages on the Main Road		589 (58.9%)
Those villages not on the Main Road and by the Distance from Main Road	Less than 2 Kms	171 (17.1%)
	2 to 5 Kms	141 (14.1%)
	More than 5 Kms	102 (10.2%)
	sub Total	420 (42.0%)
<b>Transportation Facility: Bus Stop</b>		
Villages having bus stop		796 (79.6%)
Those villages not having bus stop by the distance from the nearest bus stop	Less than 2 Kms	92 (9.2%)
	2 to 5 Kms.	8 (8.0%)
	More than 5 Kms.	30 (3.3%)
	Sub-total	207 (21.0%)
Villages having railway stations		21 (2.1%)

**Note:** Figures in parenthesis are percentage in the total inhabited villages.

**Source:** District Handbook of Statistics, Warangal.

When examined the connectivity of villages in the district through road and transportation facility, about 60 per cent of the village in Warangal district are well connected with the road and

about 80 per cent of the villages in the district are availing transportation facility. The rest of the villages have to walk about one to five kilometer distance to avail the facility.

## 8.2 Energy

Availability of Energy and its utilization play important role in the development process, it aids the economic development of a district/region/state/country. Of the different energy systems available, electricity is the single largest system that is used mostly for different purposes.

In Warangal district total number of electricity connections increased from about 4 lakh in 1990-91 to 7 lakh in 2000-01. Correspondingly the connected load in the district has also increased from 477708 KWH in 1990-91 to 1842194 KWH by 2008-09. Most of the connections and the connected load in the district has been in the low tension (LT) category.

**Table 8.3: Growth in Number of Electricity Service (Connections) and Connected Load in Warangal District**

Sno	Category	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
<b>Number of Services</b>							
1	Low Tension (LT)	393092	698540	939277.0	6594715	13408293	20671328
2	High Tension (H T)	72	84	195	3809	4194	9711
3	Total	393164	698624	939472	6598524	13412487	20681039
<b>Connected Load (KWH)</b>							
1	Low Tension (LT)	445723	889724	1688522	7532668	16453398	30590670
2	High Tension (H T)	31985	39191	153672	3357441	2694000	7752736
3	Total	477708	928915	1842194	10890109	19147398	38343406

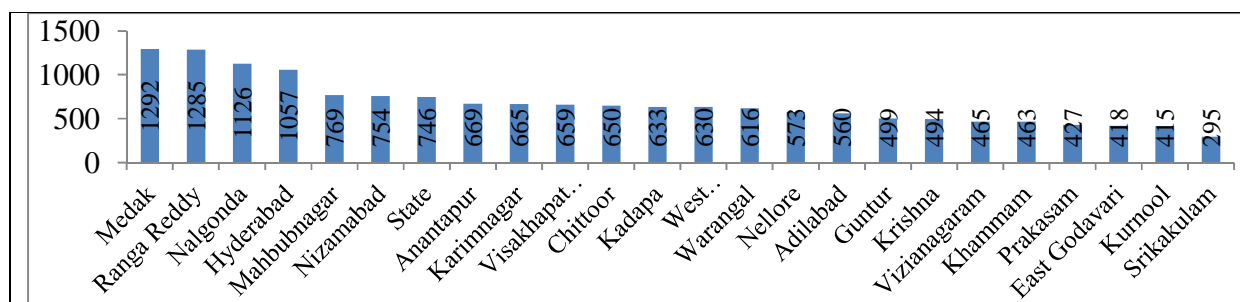
**Note:**

**Source:** Directorate of Economics and Statistics.

In the development process, in a growing economy the consumption of the electricity increases with the increasing economic activities especially those of industries. Total power consumption in Warangal District has increased from 882.42 million units in 1990-91 to 2355.27 million units by 2008-09 (Table 8.4). It is almost three times increase in power consumption in the district.

When compare the position of Warangal district with the other districts of Andhra Pradesh, it is positioned at middle level in terms of per capita total power consumption at the district level (Figure 8.2).

**Figure 8.2: Per capita Power Consumption (in Kwh) across Districts, 2009**



Note: Kwh per person.

Source: Directorate of Economics and Statistics.

The main consumer categories of electricity consumption are domestic, agriculture/irrigation and industry. In the domestic category, the power consumption increased from 78.21 million units in 1990-91 to 339.5 million units by 2008-09 so that it has shown four times increase during the period. The power consumption for agricultural activities (mostly for irrigation) is more than doubled during the last two decade (Table 8.4).

**Table 8.4: Growth of Power Consumption in Warangal District by Category**  
(In Million Units)

Sno	Category	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
1	Domestic	78.21	236.96	339.49	2078.75	5485.92	11505.85
2	Commercial	14.32	41.32	85.63	513.12	1142.04	3021.13
3	Industrial	32.05	48.51	68.4	948.6	1575.77	2512.89
4	Cottage Industries	0.7	1.02	1.39	18.1	26.85	47.84
5	Agriculture	645.38	1122.21	1527.46	6285.22	10272.13	16054.03
6	Street Lights	11.14	31.1	71.88	134.24	403.2	1596.99
7	General Purpose	1.43	2.6	5.4	37.99	114.65	149.36
8	Temporary	0	0	0.69	1.6	6.85	4.25
9	Total Low Tension	783.28	<b>1483.6</b>	<b>2100.34</b>	10017.62	18977.42	34892.3
10	Total High Tension	99.14	137.9	254.93	6064.31	6794.88	18442.9
11	Total	882.42	<b>1621.53</b>	<b>2355.27</b>	16081.93	2577.29	53335.2

Note:

Source: Directorate of Economics and Statistics.

For the industrial activity the power consumption is just doubled especially in the low (LT) category from 32 million units in 1990-91 to 68 million units by 2008-09. One has to note that most of the high tension (HT) category consumption is used for industrial activity only. The HT category consumption has increased from 783 million units to 2100 million units between early nineties to 2008-09 so that it has shown a three times increase during the period.

Increasing power consumption in the district indicates the increasing access to energy in form of electricity. At the time of state formation of Andhra Pradesh, most of the villages in the state as

well as in the Warangal district did not have the electricity connection. By 1990 there was a turnaround wherein almost all the villages in the state as well as in the district are electrified. Not only villages, most of the hamlets are also electrified in the state and the district. One has to however note that electrification of a village/hamlet does not ensure the electricity connection to the household. Although updated information on the percentage of households having electricity connection in the district is not available, by the 2001 Census household level information has shown that it is around 55% in the district in 2001.

### 8.3 Banking

With respect to the access to institutional financial services in the Warangal district, there were about 175 scheduled commercial bank branches in the district in 1990-91 and they are increased to 229 by 2008-09 (Table 6.5). However most of these bank branches are located in Urban and Semi-urban locations (see Figure 6.1).

When examined the catchment population per bank branch there were 16 thousand population per bank branch in the district in 1990-91 and it has increased to 17 thousand by 2000-01 and thereafter declined to 15.5 thousands by 2008-09. When compared to the state average the population per bank branch in Warangal district has been higher (Table 8.5).

**Table 8.5: Banking Activity in Warangal District**

Sno	Particulars	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
1	No of Branches	175	191	229	4604	5208	6635
2	Population per Branch	16108	16995	15501	14446	14415	12495
3	Credit (Rs. in Crores)	156.22	630.90	3782.70	6231.69	30344.04	210384.80
4	Deposits (in Rs. Crores)	214.30	1258.25	5021.45	8038.76	46359.24	218350.10
5	Credit-Deposit Ratio (%)	72.9	50.1	75.3	77.5	65.5	96.4
6	Per Capita Credit (Rs.)	554.2	1943.6	10656.3	937.0	3980.7	25376.2
7	Per Capita Deposits (Rs.)	760.2	3876.3	14146.0	1208.7	6081.7	26337.0
<b>Distribution of Credit (%)</b>							
8	% of Credit gone to Agriculture	45.3	33.6	23.7	26.8	18.8	13.9
9	% of Credit to SSI units	9.3	5.9	0.0	12.1	7.0	0.0
10	% of Credit to Industry	22.3	13.9	10.6	39.6	32.9	27.4
11	% of Credit to all others	23.1	46.7	65.7	21.5	41.3	58.7

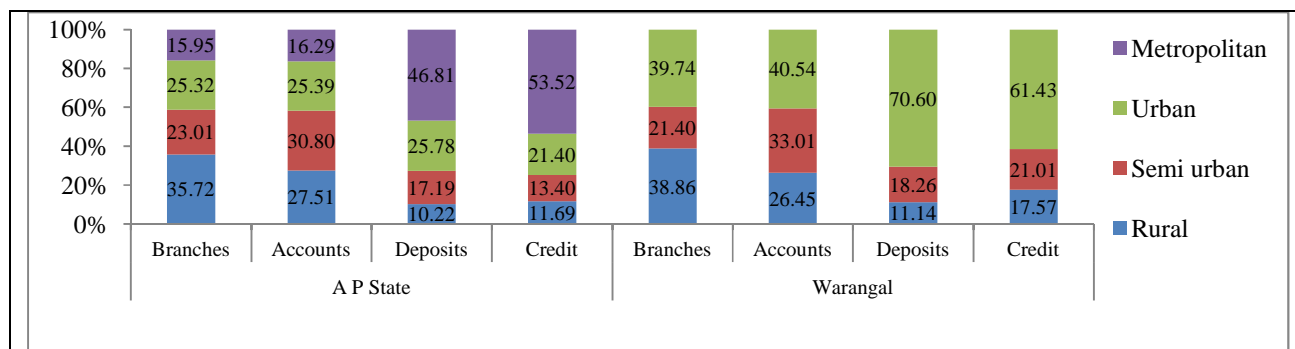
**Note:** For 2008-09 others includes credit given to SSI units.

**Source:** Directorate of Economics and Statistics.

The amount of deposits in these scheduled commercial bank branches located in the Warangal district has increased from Rs. 214.30 crores in 1990-91 to Rs. 5021.45 crores by 2008-09. The per capita amount of credit in the district increased from Rs 554 to 10656 during the last two decades period. Similarly the outstanding credit amount in the district has increased from Rs. 156.22 crores in 1990-91 to Rs. 3782.7 crores by 2008-09. The per capita amount of deposits in the district increased from Rs. 760 to Rs. 14146 during the period.

The distribution of the total credit disbursed in the district by the priority sector indicates that the share of the credit gone to agriculture sector as well as industry has continuously been declining during the last two decades period in the district.

**Figure 8.3: Percentage Distribution of Banks Branches, Accounts, Credit and Deposits in Warangal District and Andhra Pradesh State by Locations of the Branches, 2009**



**Note:** Figures in the graph are percentages.

**Source:** Reserve Bank of India.

By location of the scheduled commercial bank branch, those branches which are located in the rural settings of the district is only around one-third of total bank branches in the district and the rest are located in semi-urban or urban location (Figure 8.3). In the total number of bank accounts, the share of those accounts in those bank branches located in the rural setting is only around one-fourth. The share of the deposits (11%) in those branches located in the rural area and credit (17.6%) disbursed to sector in the total deposits and credit disbursed in the district is even lesser. When compared to state average the credit disbursed to rural sector is relatively higher in Warangal district.

#### 8.4 Communication Facilities

In terms of the communication facilities, the number of post office available in the district did not show any significant increase during the last two decades. But the number of post offices available per lakh population in the district has declined during the period.

**Table 8.6: Communication Facilities in Warangal District**

Sno	Category	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
1	No of Post Office	755	762	759	16244	16199	16149
2	No of Telephone Connections	8949	87731	53876	373058	2838418	2507458
3	Post office per lakh population	26.8	23.5	21.4	24.4	21.3	19.5
4	Tele density (per lakh pop)	317.5	2702.7	1517.7	560.9	3723.6	3024.4

**Note:**

**Source:** Directorate of Economics and Statistics.

Similarly the tele density (number of telephone connection per lakh population) is also declining during the last two decades in the district. The declining tele density is due to decline number of telephone connections in the district. The decline in the number of telephone connections in the district as well as in the state as a whole has to be read with note underlying. The number of telephone connections reported in the above table is only those of landline connections of the public sector tele services especially the BSNL. The decline in number of telephone connections could be due to decline in number of connections in the public sector tele services especially BSNL. Because in the liberalized era, when number of private operators have increased there could be shift from public to private sector services. Moreover the communication technology revolution and the result of mobile phones might have increased the demand for mobile over the landline connections. To examine these facts required data is not available at the district level.

## **IX Education - Literacy and Schooling**

The performance of the district in terms of literacy and educational development is important. It is well established fact that education is an important factor for the development an economy and society. There are different levels of education beginning from elementary level to higher education. Elementary education corresponding to 5 to 14 years age of children and school education of Class I to Class VIII is of primary importance. Given the importance of education especially the elementary, it has become a basic right.

### **9.1 Literacy**

According to Census 2011, literacy rate in Warangal district is 66.2% which is around two percentage points lower than the state average (67%). By gender, male literacy rate in the district is 75.9% and female literacy rate is 56.5% in 2011 (Table 9.1). When compared with the state average male literacy in the district is marginally higher and female literacy is around 3 percentage points lower. Between 2001 and 2011, the literacy rate in the district improved about 9 percentage points from 57% whereas the state average improved about 7 percentage points only. Thus the improvement in literacy rate during the last decade is marginally higher in Warangal district over the state average. When examined the performance in respect of improvement in literacy rate during the last three decades (between 1981 and 2011), district performance is relatively better than state average especially for the female literacy, although literacy rate in the district is lower than the state average. Among the 23 districts in the state, district Warangal stands in the middle (Figure 2.2). Across districts in the state, Hyderabad stands top in the list in terms of literacy rate followed by Rangareddy and Krishna and the least literacy rate is observed for Mahabubnagar followed by Vizianagaram and Kurnool.

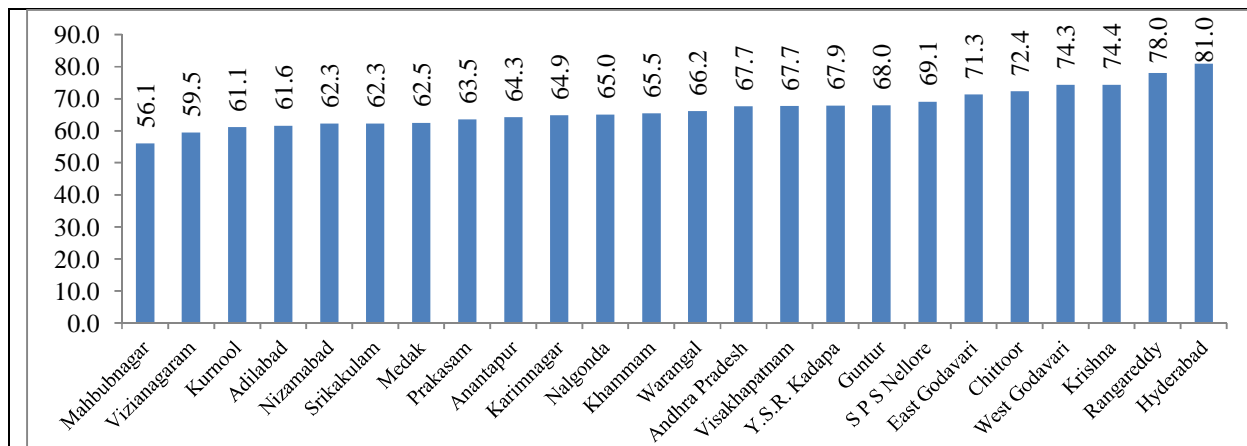


**Table 9.1: Literacy Rate in Warangal District**

Year	Warangal			Andhra Pradesh		
	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7
1961	-	-	-	21.2	30.2	12.0
1971	-	-	-	24.6	33.2	15.8
1981	23.6	33.1	13.6	29.9	39.3	20.4
1991	39.3	52.0	26.1	44.1	55.1	32.7
2001	57.1	68.9	45.1	60.5	70.3	50.4
2011	66.2	75.9	56.5	67.0	74.9	59.1

**Note:** 1. Literacy is for the 7 + age population; 2. '-' I could not locate data.

**Source:** Census of India.

**Figure 9.1: Literacy Rate across District in Andhra Pradesh, 2011**

**Note:** Literacy is for the 7 + age population.

**Source:** Census of India.

## 9.2 School Attendance Rate

At the elementary level of education the prime important aspect is that the percentage of elementary school age (i.e. 5 to 14 years) children attending schools. In Warangal district the percentage of children (5-14 years age) attending school has increased remarkably during last four decades of 20<sup>th</sup> century; it increased from 19.3% in 1961 to 78.5% by 2001 (see Table 9.2). The dramatic change in terms of improvement in school attendance rate took place during 1990s thanks of state policy intervention such as Operation Black Board, District Primary Education Programme (DPEP). However, still there is around one-fifth of the elementary school age children in the district remained out of school in 2001. The attendance rate, in 2001, in the district is found to be five percentage points higher than the state average.

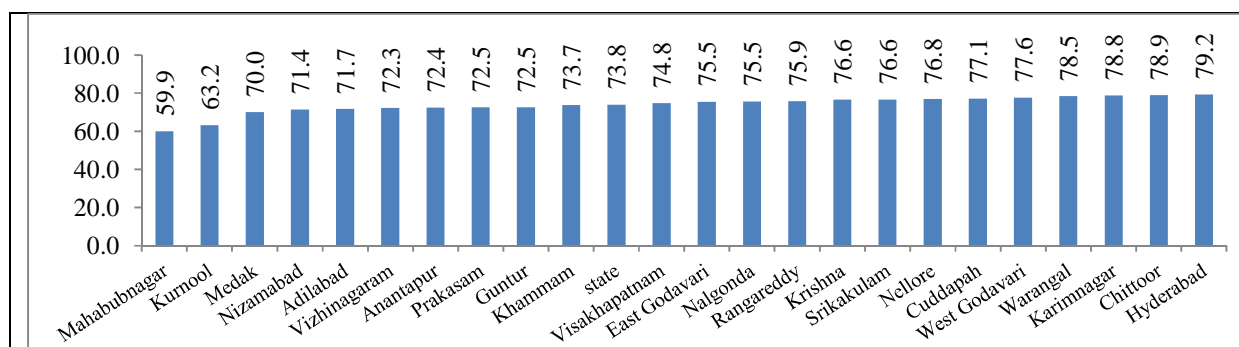
**Table 9.2: Percentage of Children (5-14 Age) Attending Schools in Warangal District**

Sno	Sex / Location / Social Group	Warangal District				Andhra Pradesh			
		1961	1981	1991	2001	1961	1981	1991	2001
1	2	3	4	5	6	7	8	9	10
1	All	19.3	35.3	47.1	78.5	27.7	40.5	49.8	73.8
2	Male	27.8	45.7	55.5	81.4	35.9	48.7	56.2	76.9
3	Female	10.2	24.6	38.2	75.3	19.3	32.0	43.1	70.6
4	Rural	15.5	29.0	41.7	77.2	23.1	33.5	43.8	72.0
5	Urban	41.5	67.4	72.5	84.6	48.8	64.2	66.4	79.1
6	SC	-	28.3	38.1	77.8	-	-	-	72.8
7	ST	-	12.8	20.5	64.8	-	-	-	60.7
8	Others	-	41.3	55.2	82.1	-	-	-	75.5

**Note:** 1. % of Children (5-14 years age group) attending School; 2. '-' not available.

**Source:** Census of India.

By gender and social groups, there are differences in the school attendance rates of elementary school age children in the district as well as in the state. But the gender, social group and rural-urban differences in the attendance rates are declining over a period of time in the district (see Table 9.2). Across districts, Warangal district stands at 4<sup>th</sup> position from top next to Hyderabad, Chittoor and Karimnagar in terms of school attendance rate so that the performance of the district is better in this respect (see Figure 9.2). However, variation across district except Mahabubnagar and Kurnool, ranges between 70 to 80%.

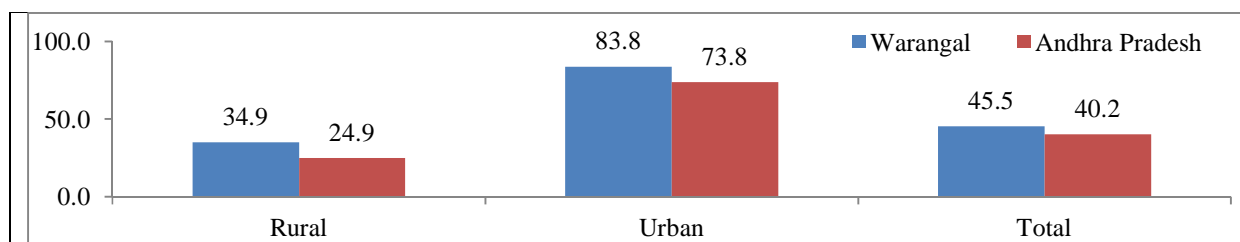
**Figure 9.2: School Attendance Rate (%) across District of Andhra Pradesh, 2001**

**Note:** % of Children (5-14 years age group) attending School.

**Source:** Census of India

With increasing school attendance rates of elementary school age children, private schooling especially private unaided school education is also increasing particularly during last two decades period in the state. It seems that Warangal district is ahead in terms of private schooling. The percentage of private school in the total enrolment at elementary level (i.e. I to VIII classes) is higher than the state average. About 45.5% of the total at elementary level in the district is enrolled in the private schools whereas the state average is 40%. Even in rural areas around one-third of the enrolment is in private schools (see Figure 9.3).

**Figure 9.3: Share (%) of Private Schools in the total Enrolment in Elementary Classes (I-VIII) in Warangal District**



**Note:** Percentage private schools in total enrolment.

**Source:** DISE, 2008-09.

### 9.3 School Education Infrastructure

There is increasing demand for schooling in the district which requires adequate schooling facilities to cater the educational needs of the children. With respect to the schooling facility in the district, the number of schools with primary classes (all those schools having primary (I to V) classes that includes primary schools and as well as upper primary schools) increased from 2281 schools in 1990-91 to 3824 schools by 2008-09. The number of schools (with primary classes) available per lakh population increased from 68 to 108 schools during the period (Table 9.3).

Similarly the number of schools with middle classes (all those schools having middle (IV to VI/VIII) classes that upper primary and secondary schools) increased from 974 schools in 1990-91 to 1736 schools by 2008-09. The number of schools (with middle classes) available per lakh population increased from 22 to 49 schools during the period (Table 9.3). The number of secondary schools, although lesser than the number of those schools with primary and middles classes, they have also shown an increase from 494 to 1068 schools during the last two decades (Table 9.3).

**Table 9.3: School Infrastructure in Warangal District**

Sno	Particulars	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
<b>Total Number of Schools</b>							
1	Schools for Primary Classes	2281	3131	3824	51811	72721	84405
2	Schools for Middle Classes	974	1512	1736	10888	25936	33116
3	Secondary Schools	494	734	1068	5163	11464	17580
<b>Schools per lakh population</b>							
1	Schools for Primary Classes	68	96	108	78	95	102
2	Schools for Middle Classes	22	47	49	16	34	40
3	Secondary Schools	9	23	30	8	15	21
<b>Average Population per School</b>							
1	School for Primary Classes	1464	1037	928	1284	1048	982
2	School for Middle Classes	4636	2147	2045	6108	2939	2504
3	Secondary School	11366	4422	3324	12882	6649	4716

**Source:** 1. Directorate of Economics and Statistics; 2. Directorate of School Education; 3. DISE

**Table 9.4: Access to School Education across Villages in the Warangal District, 2009**

School Level	Number / Percentage of Villages	Within the Village	Distance from nearest school for those villages not having school within			
			< 2 Kms.	2 to 5 Kms.	> 5 Kms.	Total
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
Primary Schools	Number	1042	12	7	0	19
	%	98.21	1.13	0.66	0.00	1.79076
Middle Schools	Number	645	116	180	120	416
	%	60.8	10.9	17.0	11.3	39.2
Secondary Schools	Number	462	104	279	216	599
	%	43.5	9.8	26.3	20.4	56.5
Junior Colleges	Number	58	38	147	818	1003
	%	5.5	3.6	13.9	77.1	94.5

**Note:** Junior Colleges are equivalent to Higher Secondary Schools.

**Source:** District Hand Book of Statistics 2009, Warangal.

The number schools at the state or district levels do not show much about the access to schooling at the village level. Thus when examined the availability schooling facility at the village level most of the village in the Warangal district have a primary school within the village. The norm of availability of a primary school within the village or less than one Kilometer walkable distances is almost fulfilled in the district. In case of middle schools the district could not meet the norm saying availability of middle school within a two kilometer walkable distance; middle school children in about 27% of the villages in the district have to walk more than two kilometers distance to get their schooling. Similarly norm for the secondary schools saying availability of secondary school within a 5 kms distance is not fulfilled in case of about 20% of the villages in the district (Table 9.4).

## X Health

With respect to health aspects, availability of data related to outcome indicators at the district level is very meager. Based on the available data the Infant Mortality Rate (IMR) in the district is around 48 (infant deaths per 1000 live births) which is lower than the state average. Similarly in terms of maternal mortality rate (MMR) the district appears to be better when compared to the state average.

Across districts in the state Warangal stands in the middle in terms of infant mortality rate in the district. The highest and lowest IMR across districts in the state is in the range of 24 and 64. The lowest is observed in Hyderabad followed by Krishna and West Godavari. The highest IMR is observed in Mahabubnagar followed by Medak and Adilabad (Figure 10.1).

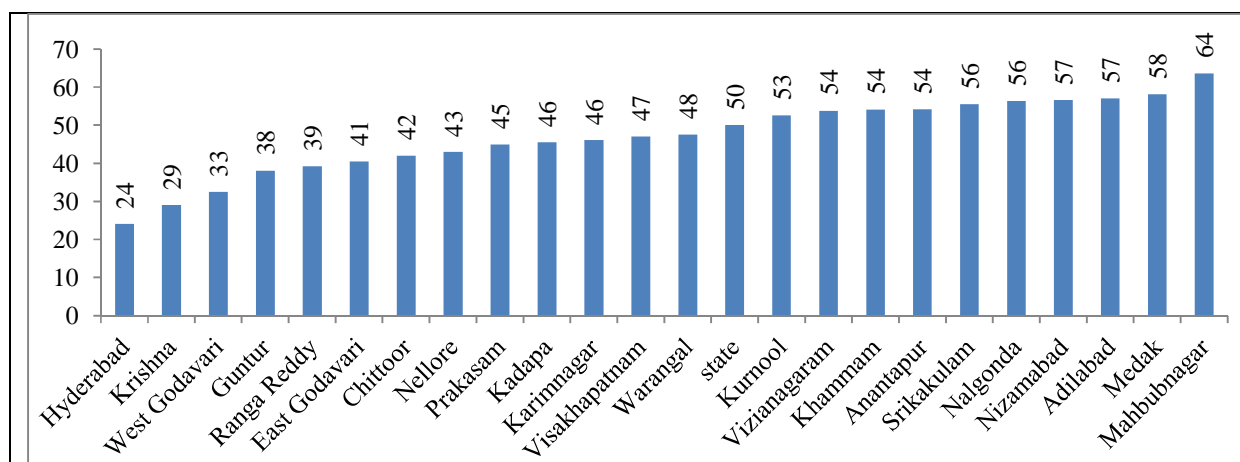
**Table 10.1: Selected Health Indicators – Warangal District**

Sno	Indicator	Year	Source	Indicator Value	
				Warangal	State
1	2	3	4	5	6
1	Infant Mortality Rate (IMR) – per 1000 live births	1991	Census	53	49
		2001	Census		
		2007-08	DES	47.5	50
2	Crude Birth Rate (CBR) – per 1000 population	2001	Census		
		2006-07	DES	20.4	20.30
3	Crude Death Rate (CDR) - per 1000 population	2001	Census		
		2007-08	DES		
4	Maternal Mortality Rate (MMR)	2007-08	DES	171	176

**Note:**

**Source:** 1. APHDR 2008; 2. DES (2009) District at a Glance, Directorate of Economics and Statistics, Hyderabad.

**Figure 10.1: Infant Mortality Rate (IMR) across Districts in Andhra Pradesh, 2007-08**



**Note:**

**Source:** DES (2009) District at a Glance, Directorate of Economics and Statistics, Hyderabad.

According to the recent District Level Household Survey (DLHS) III (2007-08) pertaining to health indicators indicates that about one-fifths of the married females in the Warangal district got married before they attained the legal minimum of 18 years age. Over the previous survey period the percentage of married females' who had got married at below 18years is declining.

**Table 10.2: DLHS Health Indicators of Warangal District**

Sno	Indicators	DLHS – 3 (2007-08)		DLHS – 2 (2002-04)	
		Total	Rural	Total	Rural
1	2	3	4	5	6
1	Percentage of girl's marrying before completing 18 years	18.3	22.2	44.4	53.0
2	Family Planning : Any Method	64.1	62.5	64.3	65.2
3	Family Planning : Female Sterilisation	50.4	49.9	51.4	52.0
4	Mothers who had at least 3 Ante-Natal care visits during the last pregnancy (%)	98.9	98.5	94.9	94.6
5	Institutional births (%)	84.5	79.2	70.3	65.4
6	Delivery at home assisted by a doctor/nurse /LHV/ANM (%)	33.4	33.4	12.5	9.4
7	Children (12-23 months) fully immunized (BCG, 3 doses each of DPT, and Polio and Measles) (%)	71.3	81.4	51.1	46.9
8	Children with Diarrhea in the last two weeks who received ORS (%)	22.4	23.4	60.0	61.8
9	Children with Diarrhea in the last two weeks who were given treatment (%)	33.1	31.8	72.9	77.5

**Note:**

**Source:** District Level Household Survey (DLHS).

Around two thirds of the married females in the reproductive age groups in the district are following one or the other family planning method. For around half of them they have gone for female sterilization.

Most of the mothers (who are pregnant and have given births in the survey period) in the district are reported to be taken anti-natal care (ANC) check-ups. Around four-fifths of the births in the district are institutional deliveries. It improved over the previous survey period.

As regards the child immunization, the recent survey indicates that around 70% of the children (12-23 months old) are fully immunized in the district and over the previous survey period there is a remarkable improvement.

### **10.1 Health Infrastructure**

Along with socio-economic indicators all that health outcomes are factored in with the access to health care facility especially the availability of primary health care in the vicinity.

In Warangal district, the number of primary health centres (PHCs) increased from 60 to 70 during the last two decades. There is a marginal increase in the number of other hospital (including general hospital and those for special treatment) in the district. The total number of doctors available in public health care system in the district increased from 386 to 543 during the period. Similarly the number of beds available increased from 1492 to 2110 during the same period.

**Table 10.2: Health Infrastructure in Warangal District**

Sno	Particulars	Warangal District			Andhra Pradesh		
		1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
1	2	3	4	5	6	7	8
<b>Rural Health Centres</b>							
1	No of Sub-Centre <sup>s</sup>	-	-	598	-	-	11978
2	No of PHCs	60	60	70	1386	1386	1581
3	No of CHCs <sup>s</sup>	-	-	11	-	-	254
<b>Other Hospitals</b>							
4	General Hospitals	-	13	12	-	339	269
5	Hospitals for Special Treatment	-	4	4	-	40	41
6	Allied Hospital	-	0	2	-	0	171
4	Total No of Hospitals	-	17	18	-	379	485
<b>Doctors and Beds</b>							
5	Total No of Doctors	386	494	543	6876	9429	10117
6	Total No of Beds	1492	1675	2110	32116	36506	39059
<b>Population Coverage</b>							
7	Population per PHC	46981	54100	50710	47986	54998	52439
8	Population per Doctor	7303	6571	6537	9672	8084	8195
9	Population per Bed	1889	1938	1682	2071	2088	2123

**Note:** 1. \$ - Facility Survey 2. Total number of hospital excludes the sub-centres but includes PHCs, CHCs, District and Area Hospital (general and those for special treatment); 3. '-' not available.

**Source:** 1. Directorate of Economics and Statistics; 2. Facility Survey.

However with the increasing population the facilities provided seems to be inadequate. The population per PHC in the district increased from around 47000 to 51000 during the last two decades. But the population per doctor and per bed has declined during the period in the district.

## XI Developmental and Welfare Programmes

There are several poverty alleviation programmes/schemes for uplifting the rural poor in the state. They include income enhancement and maintainance, wage employment programmes and programmes which provide basic minimum services such as housing, sanitation, health, and education and natural resource management and livelihoods.

Integrated Rural Development Programme (IRDP) launched by Government of India in 1978 was the begging one. Then the Development of Women and Children in Rural Areas (DWACRA), a sub-scheme part of IRDP initiated in 1982-83. The programme targeted the poor rural women for income generating activities through credit and organizational support. It is based on the Group approach unlike the all the other sub-schemes of IRDP the beneficiaries were individual persons/households. The DWACRA programme had began the era of the policy initiatives targeting poor rural women and for the livelihood security through the empowerment of women. Despite the problems involved with its implementation, it has led to the Self-Help Groups (SHGs) movement associated with women. The self-help group movement in general, has been spreading all over the state (APHDR, 2007). Today there are about 2500 groups with 3.10 lakh, women members with Rs.85 corers corpus fund in Warangal District. Women self help group movement has made indelible impact on district development in the shape of



promotion of literacy of women, decrease of population growth rate apart from empowering women economically and socially.

Drought-Prone Area Development (DPAP) and Desert-Area Development Programmes (DADP) are the two major programmes of area development initiated during 1980s. The Rural Manpower Programme of 1978 was in fact redesigned as DPAP and DADP. It is for mitigating the severity of scarcity conditions by organizing labour intensive and production oriented works through augmenting land and water resources following the watershed approach.

The Andhra Pradesh Rural Livelihood Project (APRLP) is an on-going watershed programmes to improve the livelihoods of people in rain-fed areas and to promote the participation of women in land-based development interventions and other livelihood initiatives. The Andhra Pradesh Rural Poverty Reduction Project (APRPRP) and District Poverty Initiatives Project (DPIP) were the two poverty reduction projects in the state designed to enable the rural poor to improve their livelihoods and quality of life and to reduce their vulnerability to shocks like illness, a death in the family, crop failure, livestock disease etc. They are based on the sustainable livelihoods approach (SLR) to ensure poverty reduction. The APRPRP is known as Velugu but more recently as Indira Kranti Pathakam (IKP). This programme aims at enhancing assets, capabilities and the ability of the poor to deal with shocks and risks. The programme has contributed to an improvement in the women's empowerment at the household and community level (APHDR, 2007). The Joint Forest Management (JFM), a part of natural resource management initiatives, aims at livelihood security for those associated with forest and dependent on the forest resources especially the tribals, along with its broader objective of management and protection of forest resources by forming Vana Samrakshna Samitis (VSS) based on the community based approach.

In order to supplement the inadequate no of days of employment available owing to seasonality of agricultural activities in the rural areas, rural public works programme was undertaken to generate direct wage employment especially for the poor landless labourers and poor small and marginal farmers under different scheme (NREP, RLEGP, JRY, JGSY, EAS etc). Despite problems and inefficiency in terms of targeting and cost-effectiveness, these programs have contributed significantly to reducing the severity of poverty and prevent an increase in poverty. The recent National Rural Employment Guarantee Scheme (NREGS) is an important scheme in wage employment programmes. Andhra Pradesh is one of those states in India that are considered to be relatively better ones in implementing the NREGS.

Moreover, most recently, under Backward Regions' Grant Fund (BRGF) which is one of those centrally sponsored scheme (CSS) of Government of India, Warangal district is one of the districts in the state that received the selected for the scheme since 2006-07. Under the scheme, an annual grant of Rs. 25 crores per district is sanctioned. The fund is to be utilized for improving rural as well as urban infrastructure and basic amenities across villages and towns in the district.

## **XII Concluding Remarks**

Warangal is one of those districts in Andhra Pradesh as well as in India that are afflicted with Naxal Movement and thereby violence ever since 1970s. The district was part of historic Telangana Peasant Armed Struggle on the eve of independence and known for Naxal movement after independence. The district is one of the breeding ground for the Naxal movement in the state. The kind of socio-economic conditions most prominently the semi-feudal exploitation prevailed on the eve of the Naxal movement in the district and in the Telanangana region laid the background for the movement. Initiated with Telangana Armed Struggle, later the Naxal movement paved the way for setting right adverse agrarian relations prevailed in Telangana region. While co-opting the issue of adverse agrarian relations, the State policy also played critical role in reducing adverse agrarian relations. In this respect, one may say agrarian programme from 'above' (state policy) and 'below' crucial for changing agrarian structure in the district as well as in the region. The improved agrarian relations have infused dynamism in the agrarian economy of the region and resulted in agriculture growth. Warangal district has witnessed such changes.

In the process, while improving the agrarian relations, the improvement in infrastructure such as irrigation (agriculture), road and transportation (connectivity of villages and town) and communication enhanced the access to markets and commercialization and monetisation. Also the physical infrastructure such road and transportation also improved reaching out to conflict areas and implementing state's law and order while tackling/arresting Naxal movement. This commercialization process in agriculture led the farmers to raise large private investment in crop cultivation especially in respect of irrigation and shift towards commercial crops, and on inputs for commercial crops like cotton and chillies. The failure of capital investment while exploring the ground water and crop failure led them into distress condition. In this context, Warangal District in Andhra Pradesh is known for episodes of farmers' suicides took place in the state as well as in the country during 1990s and 2000s. The improved agrarian relations freed peasantry from the shackles of feudal lords but the commercialization process tied them to capitalists, exposed them to volatile market conditions and made them vulnerable and insecure.

In respect of Industrial development very low per capita electricity consumption for industrial use indicates very low industrial development in the district. Mining (coal and granite) along with the A.P. Rayans (paper pulp) are the major industries. There are medium industries which are largely agro-based ones such as rice and floor mills. Improved infrastructure base in the district appears to be inadequate to unleash the industrial growth potentials in the district. It needs further improvements in economic infrastructure. Industrial activity of the district yet to experience such a dynamism infused into the agrarian economy of the district.

The recent advancement in the district in respect of educational development is impressive. The school attendance rate in the district has improved faster and the district could catch up with educationally forward districts of Coastal Andhra and even forging ahead of some of those districts especially during 1990s. Although district performance in literacy rate appears to better than that of state average, still Warangal district is remained one of laggards in the state. It shows historically neglect of primary education in the district. Moreover, the district occupies middle position among the districts in Andhra Pradesh in respect of health parameters.

On the whole what one say is that agrarian relations in the district have improved and the agrarian structure in the district tilting towards small and marginal farmers. However, due to in appropriate policies of the State in respect of agriculture, the dynamism infused into agrarian economy of state as well as in the district are sometimes resulting in unwanted outcomes. Industrial activity in the district is very minimal. The increasing demand for education indicating educational aspiration and job aspiration, they are arresting energies of rural youth entering into insurgency activities. Unemployment of educated youth and agrarian distress may lead to conflicts and thus social movements.

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